

LIMBA ENGLEZA CONTEMPORANA

An I, Semestrul II

Specialitatea A și B

ENGLISH MORPHOLOGY

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Objectives

The aim of the course is to offer a detailed description of both the nominal and verbal functional categories in English: the category of number, the category of determination, the category of gender, the category of case, the category of tense, the category of aspect and the category of modality and modal verbs. Functional categories work together with the lexical categories of words (i.e., the parts of speech or lexical categories, i.e., nouns, verbs, adjectives/adverbs, prepositions/particles). The pairing of lexical categories and functional categories is specific to each language and must be learnt as such (e.g., *these* boys, (he) runs/ *should* run, taller). The student should arrive at correctly using these pairings in discourse.

Introductory Remarks

Key notions: morphology, lexical categories, functional categories

Morphology is the branch of linguistics that studies the *structure of words*. Words may be simple (e.g., *girl*, *walk*, *rational*) or complex (e.g., *girl+s*, *walk+ed*, *ir+rational*).

The complexity of word structure is due to two morphological operations: *derivation* and *inflection*. Both operations add extra elements (called *markers*) to the 'naked' word, which is called the *base*. *Derivational operations* are processes such as *prefixation* (e.g., *happy* - *unhappy*), *suffixation* (e.g., *sense* – *sensation* - *sensational*) and *compounding* (e.g., *heartbreaking*, *sunflower*). As can be noticed, derivational markers can *change/shift* the lexical class of the base. For example, *sense* is a noun while *sensational* is an adjective. Similarly, *realize* is a verb while *realization* is a noun; *professor* is a noun while *professional* is an adjective. Derivational words and compound words are *lexical items* listed separately (in dictionaries). In this presentation we do not discuss derivational processes in great detail (for a detailed description of processes that pertain to

derivational morphology see the section “Formarea Cuvintelor” by Florica Băncilă in Sinteze, Editura Fundației România de Mâine, vol. I, pg. 93-111, 2004). Derivational processes are only used here for contrastive purposes with inflectional operations.

Inflectional operations, which are changes in the word that indicate *case, number, gender, person, tense, aspect, mood and comparison markers* do *not* shift the lexical class/category of the words to which they attach. For example, *boy* is a noun and *boy-s* is also a noun; *jump* is a verb and *jump-ed / jump-ing* are also verbal forms.

Inflectional markers such as those of number, tense, aspect, etc., are also called *functional categories*. Functional categories work together with lexical classes of words (i.e., the parts of speech or lexical categories). The nowadays recognized lexical categories are nouns (N), verbs (V), adjectives (A)/adverbs (Adv), and prepositions/particles (P) (*the boy, (she) must speak up, girls, smaller*). The main purpose of this presentation is to offer a detailed description of functional categories in English.

1. THE CATEGORY OF NUMBER

Key notions: countable (sortal) nouns/uncountable (non-sortal) nouns, divisibility, collective nouns, number recategorization

The category of number is related to the various ways that language uses to individuate entities.

For example, common nouns such as *man, house, and rabbit* designate entities that can be individuated and counted. The entities designated by *man, house, and rabbit* have characteristic spatial shapes and are bound in space. Notice that parts of these objects do not constitute the object itself (i.e., a man's arms or legs do not constitute a man).

On the other hand, common nouns such as *iron, gold* and *ice* designate entities that are continuous in space and cannot be individuated. They do not have a characteristic shape in space. Moreover, any part of the entities designated by *iron, gold* and *ice* is still *iron, gold* or *ice*.

Traditional grammars deal with the category of number as reflected in (i) the opposition *singular – plural* (e.g., *boy - boys*) and in (ii) the distinction between *countable – uncountable (mass) nouns* (e.g., *table/tables - wine*).

The first opposition is ‘grammatical’ in nature: one of the two terms of the opposition, namely the plural one carries a morphological marker (usually *-s*). The second distinction closely related to the first, is ‘semantic’ in nature and has to do with the way nouns denote entities in the physical world. Countable nouns denote entities that can be divided and thus counted while uncountable nouns denote entities that cannot be divided and thus cannot be counted (Baciu 2004). The semantic feature of the category of number is [+divisibility].

Common countable nouns like *man*, *house*, and *rabbit* are also called SORTALS. Uncountable / mass nouns like *iron*, *gold* and *ice* are also called NON-SORTALS. The sortal / non-sortal distinction corresponds to the COUNT / MASS distinction of nouns.

There are two properties that distinguish sortals from non-sortals.

Non-sortal (mass) nouns evince the properties of *subdivisibility* and *additivity* while sortal (countable) nouns evince the properties of *anti-subdivisibility* and *anti-additivity*.

For example, the division of a lump of gold will result into smaller lumps of gold (the property of subdivisibility of non-sortals) and the addition of a lump of gold to another lump of gold will form a larger lump of gold (the property of additivity of non-sortals). In contrast, the division of a sortal / count entity such as *table* into its top, legs and nails does no longer result into a table (the property of *anti- subdivisibility*). Sortals such as *man*, *house* and *rabbit* are also *anti-additive*, i.e., several men do not form a larger man.

The semantic properties that distinguish between sortals / non-sortals have significant *morpho-syntactic reflexes* (cf. Ștefănescu 1988, Baciu 2004).

Sortals

Sortals (i.e., countable nouns) co-occur with:

- the indefinite article *a*
- the plural morpheme *-s*
- the quantifiers *each*, *every*, *many*, *few*
- take cardinal numerals
- they trigger plural verb agreement and plural anaphoric pronouns

(1) a. Please, tell me isn't there a *ghost*?
 b. *Many girls* seem to be so ignorant

The most important semantic property of countable nouns is that they have *individualized reference* (since they can occur with the indefinite article *a*). The fact that sortals divide their reference accounts for the application of number to them.

Non-Sortals

Non-sortals (i.e., uncountable nouns) have the following morpho-syntactic properties:

- resistance to pluralization
- resistance to co-occurrence with the indefinite article *a*
- co-occurrence with (amassive) quantifiers such as *much*, *little*, *a lot of*, *an amount of*
- singular agreement with the verb and singular anaphoric pronouns

(2) a. *Water* was brought to the rescued party
b. She has *little confidence* in him
c. I have had *some cold meat* / *Was it good?*

Conceptually, uncountable nouns designate indivisible substances such as *gas*, *water*, *footwear*, *gold*, *sugar*, etc. Uncountable / non-sortal nouns do not have criteria of individuation (they are only subdivisible and additive).

Uncountable nouns do not show number variation. As a rule, they exhibit only the (unmarked) singular form. They can be individuated with the help of *classifiers* (e.g., *a drop of water*, *a lump of sugar*, *a stock of hay*, etc.).

Jespersen (1931) noticed that one and the same noun can evince both general term behaviour (i.e., + countable noun) or mass behaviour (i.e., -countable noun). Consider the following examples set in parallel columns:

<u>a tin</u> of sardines	an alloy of copper and <u>tin</u>
<u>two big cheeses</u>	a little more <u>cheese</u>
<u>a tall oak</u>	a table made of <u>oak</u>
<u>various matters</u> were discussed	the relation of <u>matter</u> and space
<u>various noises</u>	a great deal of <u>noise</u>
<u>some sorrows/ joys</u>	some <u>sorrow/joy</u>
<u>all these dangers</u> are past	there is little or no <u>danger</u>
<u>many experiences</u>	much <u>experience</u>

Moreover, the addition of classifiers, which individuate a certain portion of the intended stuff/substance, contributes to the *recategorization* of mass terms into general terms. Here are a few examples:

(3) a lump/piece of sugar; a loaf/piece of bread; a sheet/piece of paper; a bar/cake of soap; a strip of land; a grain of rice; a pile/heap of rubbish; a piece of evidence/information; a word of advice; a piece of luggage; an article/piece of

furniture; a piece/item of news; a fall of snow; a reel of thread; a cup of milk; a flutter of excitement; a pang of jealousy; a stroke of luck; an act of kindness

The Plural Morpheme

As a rule, countable nouns form the plural by adding the inflectional morpheme #s whose pronunciation varies function of the final consonant/vowel of the word it attaches to. #s is pronounced /s/ after voiceless consonants (e.g., *books, pots, beliefs*), it is pronounce /z/ after voiced consonants (e.g., *pens, mirrors, dogs*) and after vowels (e.g., *days, rays*) and it is pronounced /iz/ after hissing sibilant consonants (e.g., *buses, pieces, sizes*).

Many words entered into English from Latin or Greek and retained their plural forms from the respective language. For example, *alumnus – alumni, focus –foci, cactus – cacti, radius – radii, curriculum – curricula, millennium – millennia, symposium - symposia* are words of Latin origin. Some examples of Greek words are *analysis – analyses, thesis –theses, axis – axes, diagnosis – diagnoses, criterion –criteria, phenomenon – phenomena*.

Several English words do not make any formal distinction between the singular and the plural *sheep – sheep, fish – fish, quail – quail, shrimp – shrimp* while others still retain the Old English plural form *child – children, ox – oxen*.

All the plural affixes exemplified above are allomorphs of the same morpheme (which stands for the feature [+plural]).

Collective Nouns. Distributive and Collective Plurals

Collective nouns such as *class, audience, government* can be defined as nouns designating a whole class of individuals. They consist of individualizable elements but their morphological form is singular.

The list of collective nouns below reflects the most significant socio-cultural groupings of society as found in the area of politics, trade and industry, religion, sports, etc (cf. Ștefănescu 1988, Baciu 2004):

- (a) Politics: *assembly, air-force, cabinet, House of Commons, senate, government, party, opposition, Foreign Office, minority, majority, ministry, mass, council, congress, press, jury, committee, public, people, police, proletariat, army, troop, fleet, society, squadron*, etc.
- (b) Trade / Industry: *firm, staff, board, sales division, department, management, union, club, team*, etc

- (c) Religion: *congregation, clergy, parish, choir, ministry*, etc.
- (d) Education / Sports: *class, crew, group, school, audience*, etc
- (e) Others: *family, proportion, crowd, mob, company, aristocracy, gang, data, nobility, media, household, flock, herd, poultry, mess, swarm, pack, flight, livestock, money*, etc.

To this list we can add the names of many organizations which also display the behavior of inherently collective nouns: *the NATO, the BBC, the EU*, etc. though these nouns are usually interpreted as singular terms, since they refer to one unique body.

There are *two important properties* that characterize collective nouns:

- (i) morphologically, they are singular nouns
- (ii) from a *semantic point of view* these nouns designate *sets of individuals*

In English (but not in other languages such as Romanian) collective nouns in the singular evince a bizarre property: they can be used to denote either the individual members of the set or the whole set as a body or group.

When collective nouns in the singular designate the individual members of the set they acquire a *distributive interpretation* and agree with the verb in the plural (as in (4b)). When collective nouns in the singular designate the whole set as a body or group they acquire a *collective interpretation* and agree with the verb in the singular (as in (4a)).

- (4) a. This Government *is trying* to control inflation
- b. This Government *are trying* to control inflation

Consider some more examples that illustrate the distributive and collective readings of collective nouns (Poutsma 1926):

- (5) a. The audience, which *was* a large one, *was* in *its* place by 7 p.m. (+ coll, -dis)
- b. The audience, who *were* all waving *their* arms above *their* heads, *were* clearly enjoying *themselves* (-coll,+dis)
- c. The board *has* issued *its* new rules for the equipment of vessels at sea (+ coll)

The *collective* or *distributive* readings of singular collective nouns generally depend on *the predicate of the sentence*. Intransitive predictions like *be dispersed*, *be numerous*, *gather*, *outnumber*, *collide*, *be alike*, *be a trio*, *be a couple*, force a *collective reading*. These predicates have a collective reading and obligatorily require semantically non-singular subjects (Hausser 1974). Predicates like *be admired* or *be pleased* force a *distributive* reading of collective noun subjects.

Other classes of nouns are plural in meaning but are morphologically defective. They do not evince the singular – plural contrast.

a). Nouns like *deer*, *sheep* and *swine* have their plural form identical with their singular form. Verb agreement is either in the singular or in the plural. In fact, they are countable nouns and their morphological irregular behavior is explained in terms of their historic, diachronic evolution.

They take all the articles and quantifiers (plus cardinals) that characterize bona-fide *countable nouns*:

(6) a. There are several *deer/sheep* grazing peacefully in the distance
b. *His reindeer* are from Lapland
c. *The domestic swine* fairly dotes on snakes

b). Nouns that designate *wild animals*, *wild fowl* and *fish* have the unmarked (singular) form used for both singular and plural contexts. They are *countable nouns* and have count properties, except for the lack of plural marker on the noun, which is again explained in terms of the diachronic evolution of English. They co-occur with cardinals and plural anaphoric pronouns.

In terms of verbal agreement, the verb is always in the plural:

(7) a. *Fresh-water fish* are more valuable for the sport they provide than for the market
b. Are these *duck* or *mergansers*?
c. Did you get *many salmon* after I left?
d. Between *four and five moose* are annually eaten at the forts

These nouns are also called ‘collective singular’ nouns (Poutsma 1926). Some of these nouns such as *fish*, *trout*, *carp* take the plural marker –s when reference is made to *varieties of fish*.

The use of the singular form of the noun is the general tendency but there are also exceptions to the rule:

(8) a. You may kill a few *antelope*
b. *The true antelopes* you saw are remarkable for the graceful symmetry of their bodies

The *collective use* of the singular form of these nouns is found particularly with the shooting jargon. Compare:

(9) to shoot duck vs, to raise ducks
to shoot waterfowl vs, to keep fowls

c). Other countable nouns form their plural by Ablaut (or vowel change): *foot – feet; goose – geese; tooth – teeth; louse – lice; mouse – mice; man – men; woman – women*. Again, Ablaut preservation in plural formation is explained on historical grounds.

Compounds of '*man*' change to '*men*' as in *fireman – firemen, postman – postmen*. Similarly, compounds of '*woman*' form the plural by using '*women*' as in *house-woman – house-women, charwoman – charwomen*. Anglicized foreign derivatives of *–man* such as *German, Norman or Roman* form the plural according to the general rule by adding the suffix *–s: Germans, Romans* (Poutsma 1926).

Other survivals from Old English are a few nouns that form the plural in *–en: child – children, ox – oxen, brother – brethren*. The plural forms *brethren* (*confratī*, from the singular *brother*) is nowadays used in religious contexts:

(10) The persons least surprised at the Reverend's deficiencies were *his clerical brethren*

d). Nouns such as *cattle, livestock, poultry, people, folk, vermin* are morphologically not marked for plural (but are understood as designating sets of individuals) and agree with the verb only in the plural. These nouns lack the singular – plural contrast:

(11) a. These cattle belong to John
b. *This cattle belongs to John

Number recategorization

We turn now to the description of the classes of uncountable / mass nouns that undergo *number recategorization*, usually with a change in meaning. In this case *pluralization* and the use of *the indefinite article a* trigger number recategorization of mass nouns into countable nouns.

a). Some mass nouns can be recategorized as count/general terms when they occur in the plural but they mean 'kinds of x': *wine* – *wines*, *tea* – *teas*, *gas* – *gases*, *steel* – *steels*, *fruit* – *fruits*, *coffee* – *coffees*, *fashion* – *fashions*, etc. Consider the following examples:

(12) a. *Four wines were served at dinner. They were dry wines*
b. *Many different wines were served at dinner*
c. In the Customs list, *all fruit* is divided into three parts: *dried fruits*, *green fruits* and *nuts*
d. *There was some gas left in the bag. Air is a mixture of gases*

The newly formed terms in (12) are count terms since they have plural form, the verb agreement is in the plural, the quantifier is a count quantifier (12b) and the anaphoric pronoun is plural in form (12a).

b). Another class of *mass terms* that can be recategorized into *count terms* contains mass terms, which through pluralization denote an act / an instance / an occasion of the mass term. The act / instance / occasion count terms have *the quality* of the mass term. Here are some examples: *attention* - *attentions*, *confidence* - *confidences*, *regard* - *regards*, *curiosity* - *curiosities*, *novelty* - *novelties*, *tin* - *tins*, *paper* - *papers*, *rubber* - *rubbers*, *silk* - *silks*, *implication* - *implications*, *mentality* - *mentalities*, *respect* - *respects*:

(13) a. He shouted in order to attract *attention*. They showed the old lady *numerous attentions*
b. She showed *much confidence* in life. The two girls were exchanging *many confidences*
d. He has lost *all feeling* in his leg. *Are your feelings the same for me?*

As shown by the examples in (13) the recategorized plural nouns evince count properties as they take count quantifiers and the agreement with the verb is done in the plural.

Plurale Tantum Nouns

The term 'plurale tantum' is Latin in origin and is the singular of 'pluralia tantum', which is roughly translated as *plural-only*. The nouns that belong to this class have one single form, the plural one but their morpho-syntactic behaviour is that of *mass nouns*. According partly to their meaning and partly to their origin, pluralia tantum nouns have been divided into:

a). *Names of certain physical or mental illnesses* such as: *creeps, hysterics, jerks, measles, mumps, shakes, shivers, megrims, tantrums, sulks, shingles* etc. These nouns have the behavior of mass nouns, except for the plural marker:

(14) a. *Mumps* is a disease. *It* is infectious
b. *Shingles* has severe complications
c. The whole of her first year was *one continual series of sulks*, quarrels and revolts

This subclass of pluralia tantum nouns, which are *mass nouns*, triggers singular agreement with the verb and singular anaphoric pronouns. However, their individuation is possible by specialized lexical expressions (i.e., classifiers): *a series of (sulks)*, *a fit of (hysterics)*.

b). *Nouns that name sciences* such as: *aesthetics, acoustics, athletics, dialectics, economics, ethics, linguistics, mathematics, mechanics, optics, physics, phonetics, politics, statistics, tactics*. These nouns are basically *mass nouns*.

(15) a. *Economics* has come out into the open
b. *Ethics* is the science of the laws that govern our actions as moral agents
c. *Mathematics* is the science of quantities; *its* students are mathematicians
d. *Politics*, as a profession, was of importance to him

This subclass of pluralia tantum nouns triggers singular agreement with the verb and singular anaphoric pronouns.

However, there are cases when the verb is in the plural; in this instance, the mass noun is contextually changed into a *count/general term* that designates 'kinds of N':

(16) a. *Do mathematics* make one's manners masculine? Well, *they haven't* done so as yet in your case. But still *they are* not womanly pursuits
b. *Statistics* show that moderate consumers of alcoholic drinks live considerably longer than drunkards and total abstainers
c. It was *those infernal physics* that I have always neglected
d. What is it? Nothing about *politics*, I hope. *They* don't interest me

2. THE CATEGORY OF DETERMINATION

Key notions: definite description, indefinite description, indexicals, anaphoric value, cataphoric value, epiphoric value.

Classes of Determiners

The category of determination is another functional category of the lexical category noun.

The following groups of items are generally included in the category of determiners (Jackendoff, 1977, Cornilescu 1995, 2006, Baciu 2004):

- *articles*: the definite article *the* (e.g., *the man*), the indefinite article *a / an* (e.g., *a man*, *an umbrella*) and the negative indefinite article *no* (e.g., *no man*).
- *demonstrative articles*: *this*, *these*, *that*, *those book/s*.
- *article-like quantifiers* (i.e., quantifying elements that have the syntactic position of articles): e.g., *every*, *each*, *all*, *some*, *another*, *any*, *what*, *which book/s*.
- *cardinal numerals*, *ordinal numerals* and *lexical quantifiers*: e.g., *two*, *three*, *the second*, *the third*, *many*, *a little*, *little*, *a few*, *few*, *several (book/s)*, *much (wine)*.

Our presentation focuses mainly on the syntactic, semantic and pragmatic description of the English definite and indefinite articles.

In spite of the fact that these articles belong to the same paradigm there are important differences between them. Moreover, historically, the two articles have distinct sources: while *the* developed from the demonstrative *this*, *a* developed from the numeral *one* (Chesterman 1992, Baciu 2004).

As we have already seen (see the Category of Number) the definite article *the* is neutral with respect to the opposition countable-uncountable or singular-plural, thus being able to occur with any kind of noun (except for proper names and the abstract nouns *nature* and *mankind*) whereas the indefinite article *a(n)* occurs only with countable singular terms.

In present-day studies in linguistics, *definiteness* is defined in relation with the notion of 'familiarity' of the referent (Heim 1982) in the 'resource situation' on the side of both the speaker and of the hearer. In a given communicative situation the set of objects in relation to which the reference of an expression is established is called 'resource situation' (Barwise and

Perry 1983) or 'shared set' (Hawkins 1978). In other words, *the* conventionally implies that there is a set of entities in the universe of discourse which is mutually manifest to speaker and hearer (i.e., *familiarity*) and within which the definite referent *exists* and is *unique* (cf. Baciu 2004).

(1) *The student* called in the morning

In contrast with definite descriptions (which are associated with *familiarity* of the referent to both speaker and hearer) *indefinite descriptions* (e.g., *a student*, *a chair*) are associated with the pragmatic idea of '*novelty*' (Heim 1982) on the part of the hearer. In a sentence such as:

(2) *A student* called in the morning

a new referent (*a student*) is introduced in the universe of discourse (i.e., the resource situation) a referent which may be known to the speaker but is unknown to the hearer and cannot be uniquely identified by the hearer.

However, in negative sentences the indefinite description may refer to no object (i.e., has no referent):

(3) John didn't read *a book* the whole summer

The paraphrase of the sentence in (3) is not that there is a specific book that John didn't read the whole summer but that the set of books John read is zero.

General Characteristics of Indexicals

As can be noticed, determiners, exemplified above with definite/indefinite determiners may acquire a different interpretation function of the context in which they are used. In this respect they are very much like *indexicals*, which are items such as *I*, *this*, *that*, *yesterday*, *now*, *then*, etc. (Kaplan 1973). Indexicals, also called *deictic elements*, are expressions that have a constant linguistic meaning but acquire different interpretations each time they are used by different people at different times or locations (Kaplan 1973 in Baciu 2004).

Linguistic expressions (e.g., deictic elements, the class of determiners) have constant meaning but their interpretations may vary function of the context of use.

The components of the *context of use* are (Barwise and Perry 1983):

- indexicality or deixis
- resource situation

We briefly discuss them below.

Indexical or Deictic Elements

The term *deixis* is of Greek origin and can be paraphrased as ‘pointing to’ or ‘indicating’ something. All languages grammaticalize (or encode) information with respect to the *persons* that take part in the conversation (encoded in English as *I* and *you*), with respect to the *time* when the conversation takes place (grammaticalized by adverbs of time such as *now*, *yesterday*, *last year*, *tomorrow*, *then* and *tense markers*) and with respect to the *place* where the conversation takes place (grammaticalized by demonstrative pronouns like *this*, *that* and adverbs of place like *here*, *there*).

The traditional deictic categories are *person deixis*, *time deixis* and *place deixis*. To these deictic categories *discourse deixis* has been added (Levinson 1983). Discourse deixis deals with the relations between the deictic elements of an utterance that is located in a written or spoken text.

Resource Situation

Deictic elements are expressions that identify (i.e., establish the reference of) an individual, place and time in a given communicative situation. The set of objects within which the reference of an expression is established is called ‘resource situation’ (Barwise and Perry 1983). The resource situation is available to the speaker and/or the hearer in various fashions:

- by being directly perceived by the speaker and/or the hearer
- by being the object of common knowledge about the world
- by being built up by previous or subsequent discourse

The Values/Uses of Demonstrative Descriptions

Depending on the type of resource situation available, demonstrative descriptions have different *values* or *uses*.

The Deictic/Gestural Value

When the speaker has direct access to the resource situation and the object referred to is close (+proximal) to him the demonstrative articles *this/these* are used. When the object

referred to is at a certain distance from the speaker (+distal) the demonstrative articles *that/those* are used. These objects may also be indicated with a gesture.

(4) a. *This/that dog* cannot walk
b. *This book* is the one you should read
c. *That building* is the British Embassy

The Symbolic Value

If the speaker uses a demonstrative article that exploits some common knowledge shared by him and the hearer about the world they live in, the function of the demonstrative article is *symbolic*.

(5) *This city* is really beautiful when it is not dirty

Non-deictic Functions of Demonstratives

The non-deictic or discourse/textual functions of demonstratives are the *anaphoric* and the *cataphoric functions*.

These two functions are syntactic in nature because the objects or individuals referred to by demonstratives are located at the level of discourse: in this case, demonstratives serve as expressions that connect the speaker/reader to the discourse, which becomes the resource situation.

Anaphora

The term *anaphora* is a Greek loan and means 'backward looking' or 'pointing backwards', i.e., to *previous discourse*. In this case, demonstratives function as '*anaphors*' since they point backwards to an individual/object already introduced in the previous discourse, known as '*antecedent*'. The syntactic requirement for anaphoric processes is the relation of co-reference: the antecedent and the anaphor refer to the same individual/object.

(6) a. Bush made *his long-awaited announcement* yesterday. *This statement* confirmed
(antecedent) (anaphor)
the speculations of many observers
b. What looked like a *white lace poncho* covered him from head to foot. Beneath *this*
he was wearing a shirt

- c. *To be or not to be: that is the question*

Cataphora

The term *cataphora* is also a Greek loan but it may be paraphrased as 'pointing forward', i.e., to *subsequent discourse*. Cataphoric uses are also syntactic in nature as they involve the presence of a specification in the subsequent discourse that ensures the possibility of pointing to the intended element.

- (7) a. What I want to say is *this*: drive carefully!
- b. What do you think of *this idea*: let's take them all fishing

The Values/Uses of Definite Descriptions

The Deictic / Gestural Use of Definite Descriptions

The deictic / gestural value of definite descriptions is based on both the speaker and hearer's perception of the resource situation. Consider the following examples:

- (8) a. Close *the door*, please!
- b. PC 48, catch *the jailbird*!
- c. Don't come into this house my friend or I'll set *the dog* onto you!
- d. Don't feed *the deer*!

The Symbolic Use of Definite Descriptions

The symbolic/deictic use of definite descriptions is based on both the speaker and hearer's exploitation of the resource situation as province of common knowledge of the world (or part of the world). Consider the following examples:

- (9) a. Can you give me a lift to *the town hall*?
- b. *The Prime Minister* has just returned from a visit in the countryside
- c. Where is *the church*?
- d. Who are *the bride-maids*?

Discourse Functions of Definite Descriptions: the *Anaphoric* and *Cataphoric* Functions

General Characteristics

The discourse functions of definite descriptions are the same as those of demonstrative descriptions. The linguistic discourse acts as resource situation for both *anaphoric* and *cataphoric* functions of the definite article.

Unlike the *deictic functions* of the definite article, which depend on the possibility of relating the use of linguistic expression to the world, its *discourse functions* are syntactic in nature. They are related to whether reference by means of definite descriptions relies on previous discourse (the anaphoric use) or subsequent discourse (the cataphoric use).

The Anaphoric Value/Use of the Definite Article

The *anaphoric* use of the definite article *the* is based on the relation between an antecedent nominal and an anaphor. Consider the following examples:

(10) a. Once upon a time *a child* was born in Bethlehem. *The child* was baptized Jesus
(antecedent) (anaphor)
b. When she entered the office she saw *a little man*. *The little man* was sitting in her armchair, scratching his nose

In (10a,b) the indefinite descriptions *a child*, *a little man* function as syntactic antecedents to the anaphors expressed by the corresponding definite descriptions *the child*, *the little man*. Thus, the role of an indefinite description is to introduce a new individual (referent) in the domain of discourse, which is later on resumed by the use of a definite description. The uniqueness of reference of the definite description is ensured by the singleton meaning of the article *a* that precedes it.

The Cataphoric Value/Use of the Definite Article

The *cataphoric* use of the definite article is also based on the linguistic context that acts as resource situation. In this case, the definite article signals the presence of a post-modifier. Consider the following examples:

(11) a. **The man** who stands in the corner is my brother
b. **The milk** you bought yesterday turned sour

c. **The comment** of the publisher was completely at fault

The role of the post-modifier relative clauses in (11a,b) and that of the post-modifier of *the publisher* is to license the definite article which helps us uniquely identify the objects in discourse (*the man, the milk, the comment*).

Proper Names in the Form of Definite Descriptions

In principle, proper names cannot be used with definite articles (**the London* / **the John*) because of the double presence of the semantic feature of uniqueness: both proper names and the definite article have the role of *uniquely* identifying an individual/object.

However, definite descriptions, which name geographical areas, historical and cultural institutions, political, and administrative divisions *function* as proper names preceded by the definite article. The speaker uniquely relates them to his resource situation, based on his cultural, historical, administrative, geographical or political conventions (e.g., *the British Museum, the Atlantic Ocean, the Empire State Building, the House of Lords, the Roman Empire, the Holy Virgin, the Ritz, etc.*).

This class of unique objects that function as proper names evinces many idiosyncrasies. We mention below the following (Poutsma, 1926, Ștefănescu, 1988):

---some of these definite descriptions have the nominal in the plural: *the Rocky Mountains, the Zoological Gardens, the Low Counties, the Basque Provinces*, etc.

---some of them can occur without the nominal (elliptical definite descriptions): *the Atlantic, the Baltic, the Thames, the Tate, the Bronx, the Acropolis, the United States*, etc.

---some others may keep or drop the definite article. The definite article is mainly dropped before *names of buildings, bridges and other structures*: *Buckingham Palace, Westminster Abbey, Victoria Station, St. Paul's Cathedral, Lincoln's Inn, Magdalene College, London Bridge*, etc. The definite article is also dropped before *names of streets, squares, parks* or proper names containing nouns such as *circus, cross, field(s), garden(s)*: *Finsbury Circus, Oxford Street, Hyde Park, Charing Cross, Soho Fields, Covent garden, Russell Square*, etc. The definite article is almost regularly used before *names of hotels, museums and theatres*: *the Clarendon Hotel, the Court Theatre, the Globe Theatre, the South Kensington Museum*.

There are instances when definite/indefinite articles and cardinals can precede proper names. In this case, they behave like countable/sortal nouns and they are interpreted as designating two or more individuals or as collective nouns (with family names in the plural):

(12) a. I met *two Maries* at the party last night
 b. I am referring to *the Napoleon* who lost the battle of Sedan, not *the Napoleon* who died on Saint Helena
 c. He has a *Rembrandt* at home
 d. This is a *Ford*
 e. *The Bonnets* were engaged to dine with *the Lucases*

There is also a small class of *common nouns* that are recategorized into *proper names* on our cultural and historical basis: *the Book*, *the Virgin*, *the Flood*, *the Lord*, *the Savior*, *the Devil*, etc.

The following classes of *common nouns* are used without the definite article and they designate *unique objects* based on our everyday, routine basis (i) *mother*, *father*, *brother*, *sister*; (ii) *breakfast*, *lunch*, *dinner*, *supper*; (iii) *bed*, *church*, *school*, *home*, *market*, *college*; (iv) *winter*, *spring*, *summer*, *autumn*, *harvest*; (v) *morning*, *night*, *evening*, *noon*, *midnight*, *dawn*, *daybreak*, *dusk*, *sunrise*, *sunset*. Consider the following examples:

(13) We went to bed at *midnight* / I remember Allworthy at *college* / At one hour he was sure to be at *church*; at another at *market*; in his office at a third; and at *home* when respectable men should be at *home* / *Dinner* is served ! / I slept undisturbed till *morning* / *Aunt* was always at law with her tenants.

Indefinite Descriptions

On The Ambiguity of Indefinite Descriptions

It has been noticed that indefinite nominals (i.e., nominals prefixed by determiners like *a*, *one*, *many*, *much*, *little*, *some*, *any*, *no*) are ambiguous between a *specific* and a *non-specific* reading/interpretation. Consider the examples below:

(14) a. John caught *a fish* and ate *it* for dinner
 b. John caught *a fish* and Susan caught *one* too

In (14a) the indefinite nominal *a fish* introduces a new referent in discourse and may be referred to later on as *it* or *the fish John caught* (*a fish* functions as an antecedent for the definite pronoun *it*). In this case, we have to do with the *specific reading* of the indefinite

description, i.e., the speaker has a particular fish in mind and the hearer can identify this referent despite the indefiniteness of reference. In (14b) the indefinite pronoun *one* indicates that John and Susan caught two different fish. In this case, we have to do with the *non-specific reading* of the indefinite description *a fish*.

The Values/Uses of Indefinite Descriptions

The Epiphoric Value of Indefinite Descriptions

Since the article *a* is mainly used to introduce a new referent in discourse its main function/use is *epiphoric*:

(15) a. As it grew dark, *a ruddy glare* came out on the hilltop, and out of *the glare* the diminished commotion of the flare
b. These two men offered *a contrast* – *the contrast* no so much of generations (although Appleby was by full twenty years younger) as of two epochs of English life
c. He was armed with *a rapier* and *a dagger*, *the rapier* he held in his right hand, *the dagger* in his left

On its *epiphoric use* the indefinite article has a *specific reading*: it functions as an antecedent for a definite description (see the examples above). *The speaker* has a certain object / individual in mind and this object / individual is easily identified by *the hearer* with the help of the subsequent definite description.

The Numerical value of Indefinite Descriptions

Given the affinity between the indefinite article and the numeral *one* (the indefinite article *a/an* is the unstressed variant of *one*) its second value/use is the *numerical value*.

(16) a. He had learned *a routine* but he was essentially untrained and unspecialized
b. I need *a new dress*
c. Mary offered John *a cigarette*

The *numerical / counting value* of the indefinite article gives rise to a *non-specific interpretation* of indefinite descriptions: the identity of the referent is arbitrary to both speaker and hearer.

Generic Sentences

The subject of a generic sentence can be a definite description, an indefinite description or a plural noun with null determiner (called Bare Plural):

(17) a. *The dog* is intelligent
b. *A dog* is intelligent
c. *Dogs* are intelligent

Generic sentences have the following main properties:

The subject noun in generic sentences has a *non-specific interpretation* (i.e., it does not refer to a particular individual).

The predicate in generic sentences designates a *property* of the subject individual. The predicate is always used in the *generic present*.

Generic sentences are '*atemporal*': they do not specify a particular moment or interval of time at which the property predicated about holds. They always contain adverbs such as *generally*, *usually*, *typically* (called adverbs of quantification) which may but need not be lexically realized. Since *generally*, *usually*, *typically* are different in interpretation from the universal quantifier *always*, it follows that a generic sentence has to be true in a *significant number of cases* (not necessarily *always*). That is, a sentence such as *Dogs are intelligent* is true if there is a significant number of dogs that are intelligent and the fact that my dog is not smart does not make the sentence false.

A Note on Bare Plurals (BPs)

The term 'bare plural' is used to designate individuals / objects such as *dogs*, *cats*, *pillows*, *tigers* or *men*. They are nominals with plural nouns that lack a determiner (Carlson 1977).

Traditional grammarians called these expressions nominals with zero or null determiner in the strong belief that the 'zero' article is the plural counterpart of the indefinite article *a(n)*:

(18) a. Spot is *a dog*
b. Spot and Collie *are dogs*

It was also noticed that both the indefinite singular nouns and bare plurals (BPs) have *generic uses*:

(19) a. *A mammal* bears live young
b. *Mammals* bear live young

However, in spite of the above pairings between an indefinite noun phrase and a BP, the two have different semantic properties:

Semantic Differences between Indefinite DPs and BPs

Anaphoric Processes

It is known that indefinite descriptions may have two anaphoric pronominal correlates: *it* (which is anaphorically used) and *one* (which is not anaphorically used):

(20) a. Kelly is seeking *a unicorn* and Millie is seeking *it* too
b. Kelly is seeking *a unicorn* and Millie is seeking *one* too

Consider now a sentence that contains a BP:

(21) Queenie is seeking *unicorns* and Phil is seeking *them* too

Although *them* is the plural of *it*, in (21) *them* is *not* used anaphorically: it is not the case that Queenie and Phil are looking for the same unicorns.

We also mention another argument against treating BPs as the plural counterpart of *a(n)* nominals and further characterizing properties of BPs are presented.

There is a specific class of predicates that combines only with BPs but not with indefinite descriptions: *be widespread*, *be common*, *be extinct*, *be indigenous to*, *be in short supply*, *come in many sizes*, *be everywhere*. Consider the following examples:

(22) a. *Cats* are common / extinct / widespread / in short supply
b. **A cat* is common / extinct / widespread / in short supply

Carlson (1977) suggests that what all BPs have in common is that they are *proper names* for *kinds* of objects. *Kinds* are *proper names* for classes of individuals because both proper names and kinds share several distributional properties. For instance, both BPs and proper names can occur in generic/habitual sentences:

(23) a. *Jack* is a drunkard
b. *Birds* fly

Definite Article Generic Sentences

The sentences below unambiguously show that definite article generics are *kind* level constructions:

(24) a. *The dog* is widespread / *Dogs* are widespread
b. *The tiger* is striped / *Tigers* are striped
c. *The wolf* is getting more rare as you move north / *Wolves* are getting more rare as you move north
d. *The American* has, on the average, two children / *Americans* have, on the average, two children

Generic definites show 'conceptual' uniqueness.

Somewhat surprisingly we come across *generic sentences* where the definite article is followed by a noun in the plural. They are called *definite article plural generic sentences*:

(25) a. *The airlines* charge too much
b. *The generals* usually get their way
c. *The lions* are noble beasts
d. *The Italians* are lazy

There is a slight difference in interpretation between *bare plural generics* and *definite article plural generics* (cf. Cornilescu, 1986). Hawkins (1977) makes the following comment on the difference between his examples in (26):

(26) a. *Italians* are lazy
b. *The Italians* are lazy

"The former is more damning than the latter. (26a) claims that laziness is an inherent attribute of Italians. By contrast, (26b) involves a pragmatic restriction of the definite reference. *The*

Italians, therefore, generally refers to fewer individuals than *Italians*" (Hawkins 1977:217) (i.e., a paraphrase of sentence (63b) would be 'out of the group of workers, the Italians are lazy').

Indefinite Article Generic Sentences

Indefinite article generics raise many intriguing properties:

Indefinite article generics do not involve ordinary indefinite reference. In the generic sentence below:

(27) *A good teacher* loves all students

the indefinite article generic expression *a good teacher* has *no reading* in which a specific teacher is referred to.

Moreover, indefinite article generics cannot be anaphorically resumed by definite descriptions:

(28) a. *A pork chop* is tender (indefinite generic = *a pork chop*)
b. **The pork chop* is nourishing (definite description = *the pork chop*)

The question is what property of indefinite descriptions makes it possible that they receive a generic reading since they usually refer to one individual. Nunberg (1976) claims that the generic property ascribed to an indefinite generic nominal holds *by virtue of class membership*. The property may be essential or accidental, but the individual acquires it in virtue of its class membership:

(29) a. *A unicorn* has a single horn (essential property)
b. *A symphony* has four movements (essential property)
c. *A baby-sitter* gets \$ 2.00 an hour (accidental property)

Christophersen (1939) and Hawkins (1978) make the insightful remark that a singular indefinite generic in the examples above still involves reference to *one individual* (as opposed to the whole class), an individual that is chosen *at random* or *arbitrarily* by virtue of class membership.

Moreover, since the indefinite generic does not allow a *particular* individual but an *arbitrary* one to be picked out of the set, the indefinite generic can be used when the existence of individuals satisfying the description is not presupposed:

(30) *A / every perpetual machine runs forever*

Generic sentences with indefinite noun phrases also allow a *prescriptive interpretation*. Consider the following contrasts (Nunberg 1976 in Cornilescu 1986):

(31) a. *A Christian* is forgiving
a'. **Any Christian* is forgiving
b. *A pork-chop* is tender
b'. **Any pork-chop* is tender

The sentences in (31a) and (31b) tell us only how a Christian and a pork-chop are expected to be. (The *any*-sentences are *descriptive*, they do not allow exceptions, and hence, the sentences are not well formed).

These sentences are understood as similar to sentences that involve *explicitly evaluative expressions* as in the examples below:

(32) a. *A true Christian* is forgiving
b. *A good programmer* is smart
c. *A good pork-chop* is tender

Generic sentences like those in (32) cannot be falsified in case it turns out that, for instance, a Christian proves to be non-forgiving in his acts. This is because these generics acquire a prescriptive interpretation.

3. THE CATEGORY OF GENDER

Key notions: semantic gender, grammatical gender

General Remarks

Gender is another functional category of the lexical category noun alongside number, determination and case.

Indo-European languages distinguish three genders of nouns: *masculine*, *feminine* and *neuter*. This division reflects the concepts of *animacy*, *inanimacy* and sex manifested in language.

Indo-European languages evince roughly two types of gender: *semantic gender* (where the natural sex of an entity matches grammar) and *grammatical gender* (where the natural sex of an entity is not necessarily the criterion according to which a noun belongs to a certain gender).

Modern English has basically *semantic* gender. Gender information is incorporated in the lexical information of certain words (e.g., *man/he* - masculine, *woman/she* - feminine, *stick/it* – neuter). Moreover, the systems of anaphoric pronominal reference by *personal pronouns* (*he*, *she*, and *it*), possessives (*his/her book*), reflexive pronouns (*himself/herself*) also encode gender information.

In what follows, the discussion of gender in English mainly concerns listing nouns that evince semantic gender. (The description draws on Stefanescu 1988).

In English, the distinctions between *animate* / *inanimate* and *human* / *non-human* cut across the classification of nouns according to gender.

Nouns that denote *human beings* and *animate entities* may or may not contain gender information

The gender of male/female beings

Nouns that designate *human beings* that are marked for gender are organized in pairs: one member of the pair designates the male being and the other the female being. Several of these nouns have a third member that designates either member of the pair but is unmarked for gender. Consider the list below:

(2) man woman person/human

husband	wife	spouse
father	mother	parent
boy	girl	child
son	daughter	child
lad	lass	youth
king	queen	sovereign/monarch
bridegroom	bride	
bachelor	spinster/old maid	
brother	sister	sibling
uncle	aunt	
nephew	niece	
lord	lady	
master	mistress	
monk/friar	nun	
wizard	witch	

Other nouns that denote human beings bearing gender information form the feminine member by adding specific suffixes: #ess, # (t)rix, #ina, #ette. Consider the list below:

(3)	prophet – prophetess	count – countess
	peer – peeress	shepherd – shepherdess
	poet – poetess	heir – heiress
	host – hostess	prior – prioress
	baron – baroness	god – goddess
	lion – lioness	prince – princess
	executor – executrix	hero – heroine
	czar – czarina	suffragette / usherette

Nouns that denote *animals* are also organized in pairs: one member of the pair designates the male animal and the other the female animal. Several of these nouns have a third member that designates either member of the pair but is unmarked for gender (illustrated in the (4a) list below). Other nouns denoting animals use the male animal to designate either sex (illustrated in the (4b) list below). Other nouns use the female animal to designate either sex (as in the (4c) list below) while still other nouns make use of compound nouns with the

pronouns *she/he*, the adjectives *male/female* or proper names to indicate sex (as in the (4d) list below):

(4a)	stallion	mare	horse
	bull	cow	
	ram	ewe	sheep
	boar	sow	pig/swine
	stag	hind	deer
	cock	hen	fowl
(4b)	dog	bitch	dog
	ruff	reeve	ruff
(4c)	gander	goose	goose
	drake	duck	duck
(4d)	otter	dog-otter	bitch-otter
	fox	dog-fox	bitch-fox/vixen
	cat	tom-cat	tabby-cat
	ass	jack-ass	jenny-ass
	goat	billy-goat	nanny-goat
	hare	buck-hare/jack-hare	doe-hare
	rabbit	buck-rabbit	doe-rabbit
	pheasant	cock-pheasant	hen-pheasant
	pigeon	cock-pigeon	hen-pigeon
	bear	he-bear	she-bear

Nouns that Lack Gender Specification

There is a large class of nouns that designate human beings, which does not contain gender information: the same noun is used to denote both males and females. For these nouns gender information is attributed at the level of the sentence generally by the presence of a personal pronoun, a reflexive or a possessive (see the examples in (6)). Consider the lists below:

(5) a. relative, friend, guest, enemy, servant, fool, criminal, prisoner, thief, neighbour, stranger, foreigner, artist, chairman, cook, engineer, professor, teacher, liar, student, inhabitant, musician, etc.

- b. European, American, Dane, Londoner, etc.
- c. Christian, Lutheran, Mohammedan, heathen, atheist, republican, democrat, candidate, member, partisan, etc.

(6) a. *The teacher* praised *her* students

 b. They asked me to send them to *the author* if I should hear who *she* was

In what follows we discuss the problems raised by *referential gender*: the anaphoric use of the third person singular pronouns *he*, *she* and *it*.

In the *normative pattern* the third person singular pronouns *he*, *she* and *it* are used anaphorically to point to a noun with which these pronouns agree in gender. *He/she* are used for human beings while *it* is used for objects. Consider:

(7) a. *The bride* was not pretty nor was *she* very young

 b. *Dan* must demonstrate what *he* really wanted

 c. *A ship* is classed according to *its* tonnage

The *normative pattern* of the third person singular pronouns used anaphorically is often disregarded in *colloquial, informal speech* and *literary style*.

In *colloquial, informal speech* people may either *upgrade* or *downgrade* a non-human entity. A non-human entity is *upgraded* when it is referred to either as *he* or as *she* instead of the normative *it*. Upgrading indicates various degrees of *positive involvement* on the part of the speaker. Almost everything can be upgraded: ships, boats, steamers, balloons, airplanes, animals, football teams, pieces of furniture, watches, pipes, kites, etc.

(8) a. *A mare* with *her* young

 b. *The fly*...there was no courtesy in *him*

 c. The dogs of the house take no notice of *this deer*, being used to *her*

In *literary English*, names of abstract nouns are generally referred to as *he* or *she* (i.e., they are personified).

In many cases the gender depends on the nouns' corresponding gender in Latin (Kruisinga 1931).

Nouns such as *wisdom, crime, science, life, nature, fate, liberty, church, music* are feminine:

(9) a. I love *wisdom* more than *she* loves me
 b. *Crime...* *she* is not the child of solitude
 c. *Music* with *her* silver sound

4. THE CATEGORY OF CASE

Key notions: structural case, government, binding, semantic case

General Remarks

The Category of Case has a long history in the grammatical study of human languages. It stems from the Classical Greek word that means declension or modification of nominal categories (nouns, pronouns and adjectives). Traditional grammar was primarily concerned with providing answers to questions such as: "how does the variance of the morphological forms of case yield a difference in meaning?" In modern linguistics (e.g., Generative Grammar) it came to refer to the expression of relationships between morphological forms of nominals and the interpretational relations they bear in a sentence. Since Chomsky (1965), grammatical relations have been taken to be structurally determined; so, the morphological shape of a given nominal is also determined according to the structural position of a nominal in the sentence.

Cases appear on a nominal because they are assigned to it by another element in the sentence and this assignment of Case happens due to some specific configuration the nominal and the other element occur in. Cases that are assigned under specific structural configurations are called *structural Cases* (i.e., Nominative Case, Accusative Case, Dative Case and Genitive Case) while Cases that are due to the contribution of certain lexical items are called *inherent cases* or *lexical cases* (e.g., Ablative Case, Instrumental Case, Dative Case).

The cases of English nominals are *Nominative Case*, *Accusative Case*, *Genitive Case* and *Dative Case* and they are all structural cases.

Formal Configurations: Government and Agreement. Structural Cases

The basic formal configurations that relate the terms in structural Case assigning process are *government* and *agreement* (concord) (cf. "Government and Binding" 1981, "The Minimalist

Program" Chomsky, 1995). For instance, a prototypical example of government is government of a nominal by a head verb in a structure such as: see *him* (Accusative Case):

(1) I saw *him*

Since Acc Case is assigned under government, it is a structural case. Thus, the transitive verb *see* in (1) assigns Acc case only because it enters the structural configuration of government with a subcategorized constituent; otherwise, *see* can also be an intransitive verb meaning 'to understand' (e.g. *I see!*).

Dative Case (when preceded by the prepositions *to* or *for*) is also assigned under government:

(2) a. Sue gave the album *to him*
b. John did it *for her*

In (2a,b) the preposition *to* or *for* assigns Dative Case to the pronoun.

As far as *Genitive Case* is concerned we assume following Abney (1987) that nominals are headed not by the noun itself (N) but by D (determiner), which is the functional category responsible for the inflection within nominals:

(3) *John's strong belief* that Mary loves him

In the nominal *John's strong belief* the possessive determiner 's has the ability to assign Genitive Case to *John* under government.

Nominative Case is assigned under *agreement relation* of the subject and the agreement features on the verb. Take the following example:

(4) He loves *her*

In sentence (4) the verb *love* assigns Acc Case to *her* under government. What element in the sentence assigns Nominative Case to the subject *he*? Notice that the *inflection -s* on the verb signals not only the Present Tense but also agreement with the subject *he* in the singular. If we say *They love her*, the verb agrees with the subject in the plural.

In English, the process of subject agreement / concord is also a process of Nominative assignment.

Case as a Conceptual Notion: Case Grammar

General Remarks

We have already seen that Case is related to the morphological component of grammar (i.e., case inflections that indicate Nominative Case, Accusative Case, Dative Case) and it is also related to the syntactic component of grammar (i.e., the syntactic function of subject, direct object, indirect object of noun phrases). It is clear that these levels of grammatical analysis are interconnected and information from the morphological component can be used in the description of the syntactic component and vice versa.

The question is whether information provided by the morphological and syntactic components is related to the semantic level of analysis (i.e., meaning) as well. In what follows we try to show that all the three levels of analysis are indeed connected and grammatical levels of analysis are not autonomous components but highly condition each other.

Predicates and their Argument Structure

“Case Grammar” as initially proposed by Gruber (1965), Fillmore (1971, 1977) and later on developed by Anderson (1971), Givón (1976), Emonds (1989), Jackendoff (1987, 1990), Levin and Rappaport (1988) among others, is a *semantic theory* concerned with the structure of events function of their participants. Therefore, Case Grammar deals with predicates and their participant structure.

A sentence always contains a *predicate* (an expression denoting an activity or an event) and at least *one participant* in that action or event. An expression denoting the participant in the activity or the event is called *the argument* of that predicate. Arguments are *subcategorized constituents*. For example, in sentences such as the following:

(5) a. [The dog] *died*
 b. [Everybody] *laughed*
 c. [The policeman] *arrested* [the suspect]

the italicized verbs are *predicates* and the bracketed expressions are *their arguments*. All the sentences in (5) are *propositions* (i.e., they describe the semantic content of the clause) and the participants in the events of dying, laughing and arresting are the predicates’ arguments (i.e., *the dog*, *everybody*, *the policeman*, *the suspect*). Even if the verbs *die* in (5a) and *laugh*

in (5b) are both intransitive verbs and *the dog / everybody* are their subjects, there is a difference between these verbs. In (5a) we *semantically* interpret the argument *the dog* as the Patient that undergoes a change (i.e., from being alive it became dead) while the argument *everybody* in (5b) is *semantically* interpreted as the Agent of the activity who is volitionally doing the act of laughing and who does not suffer any change. In (5c) *the policeman* is the Agent of the predicate as he is the person who performs the act of arresting while *the suspect* is the Patient of the predicate as he is the person who suffers the consequences of the act. Semantic cases such as Agent, Patient, etc. are not to be confused with morphological case or with the syntactic function of a noun phrase (i.e., subject, object, etc.). Notice that the Patient in (5a) bears Nominative Case and is the subject of the sentence while the Patient in (5c) bears Accusative Case and is the direct object of the sentence.

In more recent models of grammar (Government and Binding, Chomsky, 1981, The Minimalist Program, Chomsky, 1995), semantic cases are called *roles* (e.g., *the dog* in (5a) plays *the role* of a Patient) or better *thematic roles* or *theta roles* (from the Greek letter theta: θ-role). The combination of cases that may be associated with a given predicate is called the *role-structure of the predicate* or *argument structure of the predicate*.

The theory of thematic relations is concerned with the description of the lexical structure of a predicate, function of the *semantic* interpretation of its argument noun phrases. The speaker's knowledge of lexical concepts includes knowledge of the semantic interpretation that noun phrases have in constructions with a verb. This type of knowledge is stored in *our mental lexicon*. Particular theta roles (such as *Agent*, *Experience*, *Patient*, *Theme*, *Goal*, *Beneficiary*, *Source*, *Instrument*, *Location* etc.) are read off from *the meaning of verbs*.

In what follows we try to provide answers to the following question:

- (i) How is the semantic interpretation of argument nouns related to the morphological component and to the syntactic component of grammar

On the Relevance of Theta-Roles in Syntax and Morphology

To see the relevance of semantic/theta roles to syntax and morphology consider the examples below that are near paraphrases; the verb *empty* evinces an alternation in its argument structure:

- (6) a. We emptied *water from the tank*

Th Source

b. We emptied *the tank of water*

Source Th

The sentences are subtly distinct: in (6a) we understand that some water was removed from the tank (change of location of water = change of location variant) while in (6b) we understand that all water was removed from the tank (change of state of the tank: from full of water it became empty of water = change of state variant). However, morphologically *and syntactically*, the two sentences are not distinct. In both sentences the verb *empty* is followed by a direct object and by a prepositional object: in (6a) *water* is the direct object while *from the tank* is the prepositional object; in (6b) *the tank* is the direct object while *of water* is the prepositional object. Syntactically, both in (6a) and in (6b) the verb *empty* is followed by a nominal (*water* in (6a) and *the tank* in (6b)) that is followed by a prepositional group (*from the tank* in (6a) and *of water* in (6b)). Thus, syntactically, the two sentences are not distinct either. However, the near paraphrase relation of the two sentences in (6) is captured only if we notice that the arguments that follow the verb bear the same *semantic* relations to the verb *empty* in both constructions (as indicated in 6) and that the meaning of (6b) (the change of state variant) includes the meaning of (6a) (the change of location variant).

Thus, a representation that allows arguments to be identified in terms of the semantic relations they hold to the verb is preferable for capturing the near paraphrase relation. Moreover, other verbs that describe the same process of removing some substance from a location evince the same alternation and the same argument structures as the verb *empty* (e.g., *clean, cleanse, drain*).

Another piece of evidence that shows the relevance of semantic/thematic roles to syntax is provided by the various argument structures evinced by verbs such as: *break, bend, shutter, crack, fold, melt* and many others. Consider:

(7) a. *John opened the door*

Ag Th

b. *The door was opened*

Th

c. *The key opened the door*

Instr Th

The examples in (7) show two important things: firstly, *all sentences must have subjects* and secondly, some theta roles are more prominent than others are and grammatical processes (such as passivization) are sensitive to the *relative degree of prominence of roles*.

Fillmore (1968) noticed that for each class of verbs there is a preferred or ‘unmarked’ subject choice: “if there is an Agent, it becomes the subject; otherwise, if there is an Instrument, it becomes the subject; otherwise, the subject is the Theme.”

Moreover, we notice that once theta roles are assigned to arguments by the verb they are preserved, irrespective of the syntactic configurations/positions in which arguments occur (compare 7a with 7b).

5. THE CATEGORY OF ASPECT

Key notions: non-deictic category, perfective/imperfective opposition, situation-type aspect

Introductory Remarks

The functional category of aspect and the functional category of tense are tightly related as they both pertain to the domain of time. They are exclusively verbal categories.

Tense (the grammaticalized form of time, roughly the *present tense*, the *past tense* and the *future tense*) locates events in time with respect to the moment of speech. This means that we cannot conceive of a past or future event unless we have a present moment of time in mind. For example a sentence such as *George left yesterday* cannot be interpreted unless the hearer has a ‘today’, a present moment of time in mind with respect to which George’s leaving can be located.

Tense is a *deictic category* (it is oriented towards the time of the speaking ego): it relates different kinds of events to the speech time and structures them by the relations of simultaneity and sequence (see the Category of Tense).

Aspect is *not* a deictic category. Let us consider the following pair of sentences:

(1) a. John read a book
 b. John was reading a book (when the phone rang / at 3 o’clock)

The difference between the sentences in (1) is not in terms of tense (both are in the past tense) but in terms of aspect.

The sentence in (1a) presents the situation in its totality, as a whole, as completed, while the sentence in (1b) presents only some internal phases/stages in its development. We do not know when John began reading the book or whether he finished reading it – we only know that his reading was unfolding in time when the phone rang/at 3 o'clock.

Intuitively, aspect predicates about *the size* of a situation (the whole of it or only parts of it) while the contribution of tense is to locate that situation in time. Both tense and aspect pertain to the domain of time as situations, irrespective of their size, occur in time. Below we shall see that the aspect of a situation, just like its tense, is conspicuously defined in terms of its temporal structure.

The Perfective – Imperfective Grammaticalized Aspectual Opposition

In traditional grammars, the notion “aspect” was used with respect to the *perfective-imperfective* opposition expressed by inflectional morphemes on the verb (as illustrated in (1) above).

The *perfective* aspect in (1a) provides a holistic, summarizing or unifying view upon the event. The *imperfective* aspect (instantiated in English as the *progressive* aspect and illustrated in (1b)) is concerned with presenting the event as divided up into *internal phases*, there being no concern for the whole situation.

In English, the opposition perfective / imperfective has not been fully grammaticalized but the opposition non-progressive – progressive is compatible with it. *Progressive aspect* is signalled by distinct morphological marking: *be – ing* (e.g., *He is/was singing*). *Perfective aspect* (also called “simple / indefinite aspect”) is rendered by the simple temporal form of the verb with no distinct morphological marking (e.g., *He sang*).

The perfective / imperfective aspectual opposition instantiates *grammatical aspect*.

Situation -Type Aspect

However, the category of aspect does not reduce to grammatical aspect only.

It was long ago noticed that verbs themselves, as lexical items, contain aspectual information. For instance, the verb *drink* designates the activity/process of drinking but *drink a cup of coffee* necessarily contains a *processual part* (that of drinking coffee) and an *endpoint* (the cup of coffee is empty at the end of drinking). Thus the aspectual interpretation of a verb is modulated by the contribution of its arguments (in our example that of the direct object argument of the verb *drink*). Below we shall see in detail that the aspectual interpretation of a sentence is not decided by the meaning of the verb alone.

This inherent aspectual dimension of the *whole predication* is called in modern linguistics *situation-type aspect* (Carlota Smith 1991).

We shall see below that both grammatical aspect (the perfective / imperfective aspectual opposition) and situation type aspect are defined and identified by using the same means of characterization: *their temporal structure* (C. Smith 1991).

In sum, the aspectual system of languages is made up of two components: the *aspectual situation type* component and the aspectual opposition *perfective / imperfective* (C. Smith 1991).

The aspectual situation type component is made up of three aspectual situations: *state* aspectual situations, *process* (or *activity*) aspectual situations and *event* aspectual situations. In the current literature, *state*, *process/activity* and *event* aspectual situations are also referred to as *eventualities* (Bach 1981)

Temporal Structure and Aspectual Situation Types

Temporal structure and aspectual situation types: *states, processes/activities and events*.

Language philosophers (Ryle 1949, Kenny 1963, Vendler 1957/1967 among many others) classified verbs in terms of their aspectual import and provided grammatical and logical criteria to distinguish among them. They intended to devise a classification of verbs *alone* in various aspectual classes. However, they were highly aware of the obvious contribution of the verb's arguments (subject and object) in aspectually classifying verbs.

We adopt Zeno Vendler's (1967) aspectual classification of verbs into *states, activities* and *events* (which, in their turn split into *accomplishments* and *achievements*).

Examples illustrating Vendler's categories are given below:

- (2) *States*: believe, desire, have, own, resemble, love, live in London, be tall
- Activities*: swim, walk, push a cart, breathe
- Accomplishments*: draw a circle, make a chair, deliver a sermon, recover from illness
- Achievements*: realize, recognize, spot, lose, find, reach

The criterion that lies behind this aspectual classification of verbs is their *temporal structure*: their duration (i.e., whether or not they have internal stages/phases) and their endpoints (i.e., whether or not they have endpoints) (C. Smith 1991).

States

At an intuitive level, *state* verbs (such as *be tall, believe, love, desire, live in London*) hold over an undifferentiated period of time and they do not contain endpoints. They are *homogeneous* eventualities. The change into or out of a state is determined by an external agent and these changes do not pertain to the state itself.

For instance, if *John is tall* he is tall over his adult lifetime and irrespective of whether he stands up or sits down. In the same line, if *John lives in London* his living in London holds over an undifferentiated period of time (it may be up to the end of his life) but this state changes if he decides to move over to Manchester.

Processes/Activities

Again at an intuitive level *process/activity* verbs (such as *swim, drink, write, dig, talk, run, or walk*) consist of successive stages that unfold in time over an interval. Activities contain arbitrary endpoints. They are also *homogeneous* eventualities.

For example, if *John is swimming* his swimming is made up of successive strokes in time and he may arbitrarily end his swimming when he is tired.

Events

Events are of several subspecies, mainly *accomplishments* and *achievements*.

Again at an intuitive level, *accomplishments* (such as *build a house, drink a cup of coffee, run a mile, dig a hole, kill*) are *bipartite* events: they consist of a *processual part*, with successive stages and a *natural endpoint* (or outcome, result, upshot), which constitutes a change of state.

For instance, if *John built a house* his building of the house consists of the proper activity/process of building and we can truthfully say that he built the house only when the result of building is attained: the house stands erected. The result/outcome signals a change of state as the house changes from being under construction into a finished house.

Achievement verbs (such as *recognize, leave, lose, find*) are instantaneous events that consist of a single stage, which results in a change of state.

For example, when we say a sentence such as *John found a penny in the street*, it aspectually means that John has the penny in his pocket the instant he finds it but not before. Such an instantaneous event is a *change of state*, as John did not have the respective coin before he found it but he had it after he found it.

Events (both accomplishments and achievements) are *non-homogeneous* or *quantized* eventualities.

At the most general level of classification, three main classes of verbal predicates and sentences are distinguished: *events* (i.e. *accomplishment* and *achievements*), *states* and *processes*, characterized by de Swart (1998) as in the chart below:

HOMOGENEOUS		NON- HOMOGENEOUS / QUANTIZED
state	process	event
STATIVE	DYNAMIC	

The Temporal Structure of the Perfective - Imperfective Aspectual Opposition

Just like aspectual situation types (states, processes/activities and events), the *perfective / imperfective aspectual opposition* can also be characterized in terms of *temporal structure* (i.e., whether or not the two aspects contain internal stages and endpoints) (C. Smith 1991).

Grammatical aspect embodied by the perfective / imperfective aspectual opposition focuses either the entire situation (the perfective aspect) or only parts/stages of it (the imperfective aspect). Thus, grammatical aspect contributes to the *visibility* of the whole or only part of a situation/predication.

In a sentence such as *Mary wrote a novel* the *perfective aspect* presents the situation as completed, as a whole, including both its initial and final endpoints. The entire situation is predicated of, not only some of its internal stages.

In contrast, the *imperfective/progressive aspect* in a sentence such as *Mary was writing a novel* focuses on some internal stages of the event of writing that includes neither its beginning nor its end.

Grammatical aspect tells us about how much we see of a situation. That is why C. Smith (1991) also uses the term “viewpoint” for grammatical aspect: in her system, perfective aspect is called *perfective viewpoint* while imperfective aspect is called *imperfective viewpoint*.

It is essential to understand that the two components of aspect, i.e., aspectual situation types and grammatical aspects / viewpoints, although independent, they *interact* in language.

For instance, the temporal schema of process/activity situation type (which presupposes arbitrary endpoints) is compatible with the closed interpretation conveyed by the perfective aspect/viewpoint, e.g., *Mary swam yesterday*. On the other hand, processes contain successive stages and so, they can select for the progressive aspect/viewpoint, e.g., *Mary was swimming*. However, state predication, which are temporally unbound (with no endpoints) cannot occur in the progressive as in English the progressive aspect/viewpoint shows *limited duration*, e.g., **John is knowing Latin*. When the duration of a state situation is perceived as limited, the state can occur in the progressive; compare *John is silly* with *John is being silly*. In the sections below we shall analyze in detail the compatibility or lack of compatibility between each aspectual situation type with the two grammatical aspects/viewpoints.

Conceptual Features of Situation Types and Grammatical / Viewpoint Aspects

The following semantic features are assumed to define and distinguish among situation types (states, processes and events) and between the grammaticalized aspectual opposition (perfective / imperfective).

[\pm Stativity]

The feature that is crucial in the characterization of situation types is the feature [\pm stative]. Cognitively this distinction between 'stasis' and 'motion' (change) is fundamental. The feature of stativity divides situation types into the classes of *states* and *non-states* (Parsons 1990).

States are the simplest of the situation types. From a temporal point of view, they consist only of an *undifferentiated* period of time, without endpoints.

Non-stative situations form the natural class of 'events' (activities and events proper). As shown by Ross (1972) *non-statives* are '*doings*'; they are dynamic, involving *causation* (which includes both agentive and non-agentive subjects), *activity* and *change*. They consist of *stages/phases* rather than undifferentiated moments. The successive changes of activities and accomplishments over time reflect dynamism, as do the single stages of achievements.

[\pm Telicity]

Situation types are also characterized as [\pm telic].

Telic eventualities are directed towards a *goal* / *outcome*, i.e. they have an inherent culmination point. When the goal is reached a definite *change of state* occurs and the event is complete (Garey 1967) i.e. it attains a final/resultant state. The goal may be intrinsic to the

event and in this case the attainment of the goal constitutes the *natural endpoint* of the event. A good example is the verb *break*, which is an inherently telic verb (e.g., *John broke the stick in a second*) (Ramchand 1999). It follows that telic events are bounded events, i.e. the final point must be specific.

Atelic eventualities are simply *processes*, which are realized as soon as they begin. Atelic eventualities have no (inherent) endpoint, but rather an *arbitrary* final point: they can stop or be terminated at any time. For example, if one doesn't continue running, one automatically ceases running. Activities / processes and states are atelic situations.

[± Duration]

The feature [±durative] also categorizes aspectual situations: some take time (activities, states, accomplishments are durative) others are instantaneous (achievements).

Compositionality

Another crucial aspectual property of all sentences is that the aspectual interpretation of a sentence is established *compositionally* (cf. Smith, 1991).

The aspectual center of a sentence is the *verb* but it is not the only factor of importance, since *situation types are associated with verb constellations* (i.e., the verb and all the other elements present in the sentence).

The suggestion put forth by C. Smith (1991) is that the aspectual feature of the verb may be overridden when combined with other linguistic forms in a sentence.

The examples in (3), taken from Smith (1991:73), illustrate the interaction between the inherent aspectual values of a few verbs with the contribution brought in by its arguments; the resultant aspectuality of the predication is calculated compositionally:

(3)	Mary walked	= walk [+activity, -telic]
	walk the dog: $v[-telic] +_{Nom} [count]$	= $VP[+activity, -telic]$
	walk to the park: $v[-telic] +_{PP} [directional]$	= $VP[+event, +telic]$
	John built a house	= build [+event, +telic]
	build the house: $v[+telic] +_{Nom} [count]$	= $VP[+event, +telic]$
	build houses: $v[+telic] +_{Nom} [mass]$	= $VP[+activity, -telic]$

Aspectual Recategorization / Shift

Aspectual recategorization or aspect shift refers to the process by means of which the aspectual interpretation of a sentence may change and be different from the aspectual class of the verb in the sentence. This is due to the fact that the aspectual meaning of a predication is calculated compositionally: it is given by the aspectual value of the verb in conjunction with the aspectual contribution brought in by the other lexical items present in the sentence. In what follows we analyze several such *recategorization processes* or *aspect shifts* brought about by the type of arguments of the verb (i.e., subject and object) and adjuncts (elements that are not either subject or object) (Dowty 1979, Filip 1999, Rothstein 2004).

Consider the aspectual information conveyed by the following predication:

(4) a. Mary walked to school (perfective / event)
b. Mary was walking to school (imperfective / activity)
c. Mary walked in the park (perfective / activity)

Example (4a) presents an event that has a ‘goal’, a natural endpoint (signaled by the expression *to school*). The situation is described as closed, completed at a time prior to ‘now’. The viewpoint of the situation is *perfective*. Example (4b) presents the same situation but it does *not* convey whether the goal was reached. The progressive form of the verb indicates that only a *partial view* of the situation is perceived. The presence of the progressive marker changes the aspectual interpretation of the *verb + to school* – the predication becomes an *activity* predication (i.e., he was in the process of going to school). The viewpoint of the situation is *imperfective*. Example (4c) presents a completed, closed situation that does *not* involve a goal (i.e., *in the park* does not express telicity). The viewpoint of the situation is *perfective*.

As can be noticed aspectual information is given by the linguistic forms of the sentence: *situation type* is signaled by the verb and other items (i.e., in (4) by the verb and the prepositional groups) while *grammatical viewpoint/aspect* is signaled by grammatical morphemes. Only *situation type aspect* can shift but not grammatical aspect because only the former is not grammatically encoded.

Consider the following examples that contain the *activity* verb *run*:

(5) a. John ran last Sunday (activity, perfective)
b. John ran to the park (accomplishment, perfective)

c. John ran a mile (accomplishment, perfective)

Sentence (5a) illustrates the basic aspectual feature of *run*: it is an *activity* verb of motion. The whole predication is an *activity* predication and due to the presence of the simple past tense it is also *perfective*. However, when this activity verb of motion occurs with a locative of destination (as in (5b)) or an adverb of extent (as in (5c)) the whole predication is interpreted aspectually as an *event* due to the semantic contribution of the prepositions (i.e., accomplishments).

One of the tests that distinguish between *activities* and *events* is their restriction of occurrence with time-span adverbs such as '*for an hour*' and '*in an hour*'. Activities select 'for x time' adverbs while events select 'in x time' adverbs:

(6) a. John swam for an hour
b. *John swam in an hour
(7) a. John built the kite in an hour
b. *John built the kite for an hour

However, when a sentence contains an *event* (accomplishment) verb such as *eat something* or *build something* and a time-span adverb, the aspectual interpretation of the whole sentence depends on the grammatical type of the direct object of the verb (Dawty 1979). Consider the contrasts below:

(8) a. John ate a bag of popcorn in an hour (accomplishment, perfective)
b. John ate popcorn for (*in) an hour (activity, perfective)
(9) a. John built the kite in an hour (accomplishment, perfective)
b. John built kites for (*in) an hour (activity, perfective)

In (8b) the direct object of the verb *eat* is a mass noun (i.e., *popcorn*) and in (9b) the direct object of the verb *build* is an indefinite plural (i.e., *kites*). These features of the direct objects shift the aspectual interpretations of the sentences in (8) and (9): from basic *accomplishments* as in (8a) and (9a) into *activities* as in (8b) and (9b).

Similarly, sentences that contain event verbs of the *achievement* type may shift in interpretation function of the type of direct object or subject these achievement verbs occur with. Consider the following examples:

- (10) a. John discovered the buried treasure in his yard in two days (achievement)
- b. John discovered fleas on his dog for (*in) six weeks (activity)
- (11) a. Tourists discovered that quaint little village for years (activity)
- b. *John discovered that quaint little village for years

Sentence (10b) recategorizes as *activity* predication and it is well formed because John discovered different fleas (not the same flea) for six weeks in a row. John's perpetual discovery of fleas qualifies as an activity not instantaneous achievement. Similarly, in (11a) the indefinite plural subject (i.e., *tourists*) of the achievement verb triggers aspectual recategorization of the sentence: since various tourists discovered the little quaint village for years on end these 'multiple instantaneous discoveries' shift the interpretation of the sentence into an *activity*.

There are also cases when *intransitive activity verbs* can occur in *transitive resultative constructions*, which are aspectually *derived accomplishments*:

- (12) a. At the opening of the new parliament building, the crowd cheered the huge gates open
- b. Mary drank John under the table / sick / dizzy

However, aspectual category shifts are *not* always available. For instance, the verbs *wheeze* and *croak* are both characterized as 'sound emission verbs' which denote *activities* (Levin and Rappaport 1995, Filip 1999). Yet, it is only one of them that can be 'fitted' into the direction-motion construction, qualifying as *accomplishment*.

- (13) a. The elevator wheezed to the seventh floor
- b. *The frogs croaked to the pond

In sum, the *conclusion* we draw is that the aspectual properties of a predication are decided at the level of the whole sentence and does not depend exclusively on the aspectual class of the verb, although its aspectual contribution is *central*.

As noticed above, in language, aspectual situation types do not occur independently from grammatical (viewpoint) aspect. That is, *state, activity and event situation types* conveyed by the constellation of the lexical elements present in the predication co-exist with the

grammatical / viewpoint aspect (i.e., the perfective / imperfective aspectual opposition) conveyed by grammatical morphemes. These pairings are not always straightforward and may acquire a variety of interpretations. The sections that follow present a detailed analysis of these pairings.

States, Activities and Events in the Perfective Aspect

In English the perfective viewpoint interacts with all situation types but its span depends on the endpoint properties of situation types; in principle, the situation cannot continue after its endpoint. Compare:

(14) a. <i>activity</i>	Pluto chased a car (*and is still chasing it)
b. <i>accomplishment</i>	Susan wrote the report (*and is still writing it)
c. <i>achievement</i>	The plane landed (*and is still landing)
d. <i>state</i>	Sam owned several apple orchards (and he still owns them)
	Sam owned several apple orchards (but he no longer owns them)

In the examples (14a,b,c) the situations are presented as *closed*. There are nevertheless slight differences among these situations function of the endpoint properties of each situation type. The sentence in (14a) presents a *terminated* eventuality since the activity described qualifies as *atelic*. The sentences in (14b,c) present *intrinsically completed* situations since these events describe *telic* situation types.

Moreover, the '*stop*' and '*finish*' tests distinguish between the two types of endpoints. Atelic predications felicitously occur with '*stop*' (*stop chasing the car; stop kicking the ball*) while telic events felicitously occur with '*finish*' (*finish writing the report*).

In contrast, stative sentences with a perfective viewpoint, illustrated in (14d) are *flexible* in interpretation (as known, states do not standardly occur in the progressive viewpoint). Since stative situation types *do not* conceptualize endpoints in their temporal schema, statives in English are compatible with both a *closed* and an *open* interpretation, depending on the context. On the *open reading* the state continues into the present and such sentences naturally conjoin with present tense affirmative sentences as the example above indicates. Statives also allow for a *closed interpretation*, i.e. the state has ended; conjoining stative sentences with negative present tense sentences can convey this reading.

In sum, the perfective viewpoint with non-stative situation types makes visible for semantic interpretation the whole situation.

The Imperfective Viewpoint and Aspectual Situation Types

General Characteristics of the Imperfective Grammatical / Viewpoint Aspect

The English *progressive* is the *imperfective* viewpoint pendant found in Romance and other languages.

The English progressive is independently realized as the auxiliary BE plus the present participle of the verb:

(15) Mary was talking with her father (when I entered)

The progressive viewpoint makes visible only part of the situation, with no information about its endpoints.

Informationally, sentences in the progressive form are *open* i.e., the progressive viewpoint does *not* linguistically present closed situations.

The progressive viewpoint is felicitous with situation types that are *temporally characterized as having internal stages*, namely *activities/processes* and *accomplishments*:

(16) a. Mary was sleeping/running/walking (when I arrived)
b. Susan was writing a report/eating an apple/drawing a triangle (when I arrived)
c. *Susan was loving me (when I asked her)

States are disallowed from occurring in the progressive unless they acquire a marked interpretation of *dynamism* and *volition* (see the sections below) (Comrie 1976, Dahl 1985, C. Smith 1991).

Again in principle, instantaneous *achievement* predicates cannot occur in the progressive because they do not contain internal stages as illustrated in (17a). However, *some* achievements can occur in the progressive when the progressive focuses on the *preliminary stages* of the event as illustrated in (17b,c).

(17) a. *John was finding a penny in the street (when I saw him)
b. The plane was landing

c. John was dying

Jespersen's (1933) View on the Properties of the English Progressive

Jespersen (1933) detected the essential properties of the English progressive by means of analyzing the sentence: *He was hunting*.

"The chief use of the expanded tenses [progressive aspect] is to serve as a *frame* round something else, which may or may not be expressly indicated. This is easily understood if we start from the old phrase *he was on hunting*, which meant 'he was in the course of hunting, engaged in hunting, busy with hunting'; he was, as it were, in the middle of something, some *protracted action*, denoted by the substantive *hunting*. Here *on* became phonetically aand a was eventually dropped, exactly as in other phrases: *burst out on laughing*, *a-laughing*, *laughing/ fall on thinking*, *a-thinking*, *thinking*; *set the clock on going*, *a-going*, *going*, etc. If we say *he was (on) hunting*, we mean that the hunting (which may be completed *now*) had begun, but was not completed at the time mentioned or implied in the sentence; this element of *relative incompleteness* is very important if we want to understand the expanded tenses, even if it is not equally manifest in all cases. The action or state denoted by the expanded tense is thought of as a temporal frame encompassing something else which as often as not is to be understood from the whole situation...".

Thus, in Jespersen's view the properties of the progressive are:

- it shows a durative, protracted action (i.e., it is durative)
- the progressive focuses a 'framed interval' (i.e., it is temporary)
- the action is incomplete

Let us take a closer look at these properties.

The intuition developed by Jespersen is that the progressive situation takes place at an extended "framing interval" (i.e., called Event Time (ET)). The progressive itself focuses only on a "framed interval" (i.e., called Reference Time (RT)). Thus, the meaning of the sentence *He was hinting* is roughly *He was hunting (when I saw him)*.

Essentially, this is also the meaning we attribute to a state sentence such as: *She was here (when he called me)*.

Other examples that illustrate the important role played by RT in the understanding of the English progressive are offered below:

(18) Mary was making coffee [when John came home]_{RT}
[at five o'clock]_{RT}

The role of RT is to 'anchor' in time the situation described in the progressive clause for a complete temporal understanding of the whole sentence. *Mary was making coffee*, in isolation, is informationally incomplete. From sentences such as those in (18) we understand that Mary's making coffee is true *at least* at the RT (*when John came home, at five o'clock*), although her making coffee usually lasts longer.

From another point of view we can say that the main clause '*Susan was making coffee*' (the framing interval) establishes the interval against which the event of '*John's coming home*' (the framed interval) is set (cf. Kearns, 1991). As such, the main clause is the *background* against which the *foreground* information is asserted (*when John came home / at five o'clock*).

In sum, the progressive describes eventualities that are *durative / protracted* and at the same time '*temporary*' (i.e., they hold *at least* at the RT).

Jespersen definition also includes another important intuition, namely that the 'protracted action' denoted by the progressive sentence *had begun* before the time stated or implied in the sentence (before RT).

States in the Progressive Aspect

State predicates, which are characterized as [+stative] are incompatible with the progressive. States are described as having an abstract quality and an atemporal interpretation.

In the examples below the state describes a '*characteristic property*' of the subject *John*. This property holds independently of whether at a given moment of time (and place) John does not prove to be intelligent, a nice person or a hero:

(19) a. John is intelligent
b. John is a nice person
c. John is a hero

Other examples of state predicates that describe characteristic/inherent properties of the subject are *be tall, be blonde, be erudite, be green, be widespread*.

In general, state predicates of this type do not have the property of 'agency'.

However, state predicates that denote *transitory properties* of the subject can occur in the progressive (e.g. prototypical examples are *be scared*, *be afraid*, *be available*). Consider the contrasts below:

(20) a. William is a hero (characteristic property of the individual William)
b. William is being a hero (temporary property, valid only over the interval stated by the progressive)

a. Mary is a naughty child
b. Mary is being naughty
a. Harry is clumsy
b. Harry is being clumsy

All the sentences in (20a) describe a rather permanent property ascribed to an individual.

In all the (b) sentences the interpretation is that the subject deliberately or intentionally *acts* in the way described by the predicative adjective or noun. In other words, the eventuality is viewed as containing some processual stages/phases (Parsons 1990). This interpretation allows the use of the progressive with these state predicates and they are described as temporary.

Activities / Processes in the Progressive Aspect

Processes are homogeneous and atelic situations. Processes have been described as being made up of *internal stages*. Their endpoints are arbitrary.

They naturally occur in the progressive and the internal stages/intervals of a process predication are always *anchored* contextually. In the examples below the temporal anchorage is provided by the *when*-clause or by pure temporal adverbs

(21) a. It was raining heavily *when she arrived home*
b. We are traveling *now* for amusement and instruction
c. *This time last year* I was traveling through Europe

In (21) the process is in progress and it is true *at least* at the anchorage time (i.e., RT). The time of the progressive is said to be *definite* (Kearns 1999).

There are cases when the interval of time denoted by a *durational adverb* is not felt to be *shorter* than the full progressive situation. Consider the following examples:

(22) a. *All through dinner* they were talking of nothing else but the match
 b. I was knitting *for two hours* this morning
 c. The band was playing, the flags were fluttering and the crowd was cheering *as the players ran onto the field*
 d. Mary was sleeping *when I was working*
 e. They were watching television *while we were working*

The sentences above describe a situation in which the main clause in the progressive is *simultaneous* with the event in the subordinate clause (or with the time interval stated by the durational adverb).

Events in the Progressive Aspect

Event predications (i.e., accomplishments and achievements) are described as *telic* eventualities. They involve a *product*, *upshot* or *outcome*, which is a *definite change of state*. With *accomplishment predications* the change of state is preceded by some *activity/process*: it is the activity/process that can occur in the progressive. Therefore, accomplishments are *complex events*. An accomplishment hides a causal structure of type [e₁ causes e₂] where e₁ is the causing activity and e₂ is the resulting change of state. In the progressive, accomplishments are conceptualized as 'durative' eventualities. Consider the following examples:

(23) a. The river *was cutting a new channel* to the sea, but the men with the sandbags stopped it from doing so
 b. Maybe she is *making a Spanish omelet*
 c. Within a stone's throw of my house *they are building another house*

All the sentences above contain *accomplishment predications* that undergo a change of aspectual class due to presence of the progressive operator: they *shift into process predictions* that are unfolding in time at the a given reference time, the reaching of their goal being 'suspended'.

Achievement predictions, the other subclass of events, denote eventualities that take place at single moments of time. They are *instantaneous* events that have no proper internal parts (phases); hence the progressive cannot be applied to them.

Achievements focus on the change of state, simply leaving out the causing activity / process and the causing factor:

(24) a. My father died
b. My father died (from his wounds in the end)

6. THE CATEGORY OF TENSE

Key notions: deictic category, axis of orientation, Speech Time, Reference Time, Event Time

General Remarks

The category of tense is a functional category of the lexical category verb alongside the categories of aspect and mood. It is signaled by inflectional markers either on the verb itself (e.g., *walked*) or on the auxiliary verb (e.g., *will walk*).

As we are going to see, beside tense inflections marked on the verb, temporal adverbs as well contribute to the temporal specification of sentences.

Tense represents the *chronological order* of events as perceived by the speaker at the moment of speaking. That is, tense is fundamentally a *deictic category* as the chronology of events (i.e., their order in time) is always established function of the moment '*now*' of the speaking ego (i.e., events are present, past or future).

At an intuitive level, the speaker is able to place a perceived event in time because he sets it in relation with another event with respect to which the perceived event occurs either *before*, *after* or is *simultaneous* with the other event. An event that serves as orientation event for other events is a '*source event*' and it is said that it creates '*an axis of orientation*'.

The *moment of speech* of the speaking ego serves as *source event in grammar*. The moment of speech 'locates' the speaker in time and other events are *present* (i.e., they occur simultaneous with it), *past* (i.e., they occur before it) or *future* (i.e., they occur after it) relative to the moment '*now*' of the speaker. The present moment '*now*', which is the moment of initiating a discourse creates the *present axis of orientation*.

However, the present moment is a fleeting moment and as soon as it has been established it inevitably undergoes the change into a past moment: it becomes a past moment of time with respect to which other events are simultaneous with, occur before it or after it. A past moment in time is another source event and it creates the *past axis of orientation* (e.g., *left*, *had left*, *would leave*).

By the same reasoning a future event in time can become a source event and other events can be simultaneous with this future event, can occur before it or after it. In this case, the future event creates the *future axis of orientation* (e.g., *will leave*, *will have left*).

The present axis of orientation, the past axis of orientation and the future axis of orientation are the basic axes of orientation in grammar. The tenses that serve as source event form the class of *absolute tenses* (in English, *the present tense*, *the past tense* and *the future tense*) while all the other tenses are *relative tenses*.

However, languages do not *grammaticalize* time in the same way: for one thing, the number of tenses in natural languages varies and the grammaticalized tenses do not have exactly the same values in all languages. On the other hand, we have seen that Aspect is tightly related to Tense as Aspect is also defined in terms of temporal structure.

The question is what primitive/basic elements make up a tense and how a grammar of tense can be devised.

In what follows we describe the tense theory proposed by the logician Hans Reichenbach in 1947, which with minor modifications is the most widely accepted theory of tense in present day linguistics.

The Notions of Speech Time, Reference Time and Event Time

Reichenbach's tense theory characterizes all tenses in terms of three basic constitutive temporal entities and as we are going to see below the relations between them define both *tense* and *aspect*.

Reichenbach's tense theory takes three temporal entities as basic viz., *speech time* (ST), *reference time* (RT) and *event time* (ET). These primitive temporal notions are characterized as following. *Speech Time* is the time at which a certain sentence is uttered, i.e., the moment of utterance/speech. *Event Time* is the moment at which the relevant event or state occurs.

Let us calculate the temporal interpretation of the following sentence, taking into account two of the temporal notions defined above (namely ST and ET):

(1) Mary won the prize last week

ST is *now*. ET is calculated by taking into account the information brought in by the *past tense* of the sentence in conjunction with the past temporal value of the adverb *last week*. The relation between these two temporal notions is written as $ET < ST$ (the sign $<$ indicates that ET occurs before ST and the point of this sign indicates the temporal entity that temporally precedes the other temporal notion).

Reichenbach does not explicitly define RT. However, it can be intuitively characterized as standing for *the temporal axis* (present, past or future) specified in the sentence. It is calculated by taking into account the temporal information brought in by *the tense* of the sentence and by the information of *the temporal adverb*.

RT is the *key notion* of Reichenbach's system. Indeed, without it the temporal specification of *perfect sentences* cannot be calculated. Consider the following example:

(2) Mary had already won the prize last week

The event predicated of in sentence (2) is past as it was in sentence (1) but this time, we understand that the past event of Mary's having already won the prize (ET) occurred in the past prior to something else, which is also past. RT signals this 'something else', without which we do not understand the sentence from a temporal point of view. Thus, the temporal specification of the sentence is:

ST = now

RT = past, $RT < ST$

ET = had, already with respect to RT, $ET < RT$

It is important to emphasize that the temporal notion of RT *has been generalized and enters the calculation of the all sentences*. For instance, in sentence (1) above, ET is taken as unspecified as we do not know precisely *when* it took place in the period of last week. Thus, ET and RT are taken to be simultaneous (i.e., $RT = ET$). The overall interpretation of sentence (1) above is:

(1') ST = now

$RT < ST$

ET = RT

It can be noticed that Reichenbach's tense grammar takes ST, RT and ET to be time moments or time intervals on the time line and tenses are viewed as means of representing events vis-à-vis the moment of speech (Hornstein, 1982). Each tense appears represented as a complex configuration with a characteristic structure whose elements are ST, RT and ET concatenated by the relations of simultaneity and sequence.

Let us take some more examples and see how the proposed theory handles them:

(3) Mary is leaving tomorrow

ST is *now*; the tense form and the temporal adverb point to a time *after* ST that is, on the future axis of orientation ($ST < RT$). The ET is left unspecified, i.e., we do not know when the event is scheduled to take place (represented by the formula $ET = RT$). The overall interpretation of sentence (3) is:

ST = now
ST < RT
ET = RT

Notice that the three temporal notions ST, RT and ET enter temporal calculation in this precise order. However, since RT is the *key notion* in Reichenbach's tense theory it is RT not ST that is first written in a formula. In fact, in his system the formula of the future tense is $RT > ST$. This formula, although counterintuitive, is equivalent to $ST < RT$. (In present day tense theories the formula $ST < RT$ is in use (cf. Demirdache and Etxebarria (2002, 2004)).

Consider now the analysis of sentence (4):

(4) Joan decorated the cake before midnight

ST is *now*. In sentence (4), RT is specified by *the tense* and by the temporal adverb *midnight*, which relative to *now* is past ($RT < ST$). The ET, the time when the cake was decorated, is specified by the preposition *before*; ET is situated before RT. The overall representation of sentence (4) is:

ST = now
RT = past, $RT < ST$
ET = before RT, $ET < RT$

Consider also sentence (5) below where the speaker *at now* anticipates two events in the future:

(5) John will have eaten the cake (by the time you come)

ST is *now*, RT is future, that is, *after now* (RT > ST, cf. in Reichenbach's system) while ET is *before the future* RT (ET < RT). The overall interpretation of sentence (5) is:

ST = now
RT > ST
ET = before RT, ET < RT

Consider finally the temporal interpretation of the sentence in (6):

(6) Bill has met her before

ST is *now*. RT is *present* (i.e., in English, an implied *now*), while ET is anterior to *now* as indicated by *have*. The overall interpretation of the sentence in (6) is:

ST = now
RT = present, RT = ST
ET < RT

The above examples point to the very important role ST, RT and ET play in the interpretation of both *tense* and *aspect* in a sentence.

In fact, the relations that hold between ST and RT instantiate *tense* (present: ST *simultaneous with* RT, past: ST *after* RT and future: ST *before* RT). On the other hand, the relations that hold between RT and ET instantiate *aspect* (perfective aspect: RT coincides with ET, progressive aspect: RT is included in ET (is 'within' ET)).

In sum, the relations holding between ST, RT and ET render both *tense* and *aspect* as both *tense* and *aspect* are *temporal notions*. This is a very welcome result of Reichenbach's theory as it is clear that *tense* and *aspect* are both present and interfere in a sentence. The temporal and aspectual formulae presented above form what we call the *Abstract Temporal Representation* of a sentence (ATR).

Temporal Values of the Main Tenses in English

General Properties of the English Simple Present Tense

The Present Tense is essentially a *deictic tense* (i.e., it is always oriented to the moment of speech and the speaking ego). It enjoys both *psychological being* at the present moment (Leech, 1971) and *actual being at now*.

Informationally, a present tense sentence can not include the endpoints of the situation. The *present tense* is *incompatible* with *perfectivity*. In Reichenbachian terms, its ATR is [RT = ST, ET = RT].

Thus, present tense sentences, irrespective of the situation type (state, activity or event), must be *states* (Smith, 1991).

From the very start it is important to notice a peculiarity of the English present tense: predicates belonging to the *accomplishment* and *activity* classes do *not* allow a *continuous, ongoing / imperfective interpretation* of the present tense (Giorgi and Pianesi 1997). This is in sharp contrast with the other Germanic languages or Romance languages.

Consider the following examples that contain a *state*, an *accomplishment*, an *activity* and an *achievement* predicate in the simple present tense in English and Romanian:

(7)	John loves Mary	(state)
(8)	John eats an apple	(accomplishment)
(9)	John runs	(activity)
(10)	*John finds a book	(achievement)

(7')	Ion o iubește pe Maria	(state)
(8')	Ion mânăcă un măr	(accomplishment)
(9')	Ion aleargă	(activity)
(10')	*Ion găsește o carte	(achievement)

The *state predictions* in (7, 7') in the simple present tense mean that a certain state holds of the subject at ST. There are no interpretative differences between English and Romanian.

The *achievement predictions* in (10, 10') are ill formed in both languages.

The *accomplishment predictions* in (8, 8') and the *activity predictions* in (9, 9') receive sharply distinct interpretations in the two languages under study. The English accomplishment prediction in (8) does **not** mean that John is presently engaged in an

ongoing activity of eating an apple as it does in Romanian (see the accomplishment predication in (8')). In English, it means that John is an apple-eater. Again, the English activity predication in (9) does **not** mean that John is presently engaged in the activity of running as it does in Romanian (see the activity predication in (9')). In English, it means that John is a runner.

In order to obtain the continuous reading in English *the progressive* must be used:

- (11) John is eating an apple
- (12) John is running

Other Values/Uses of the Simple Present Tense

Generic and Habitual Sentences in the Simple Present Tense

As mentioned above, in English and other languages, present tense accomplishment and activity predication can express *habituality* and *genericity*:

- (13) John eats an apple *every day* (habitual reading)
- (14) John goes to the cinema *twice a week*
- (15) John smocks cigars (generic reading)
- (16) Dogs bark

Habitual sentences explicitly contain a frequency adverb that conveys the meaning of repetitiveness as in (13) and (14). Generic sentences do not occur with frequency adverbs but implicitly contain the adverb *always* as in (15,16).

Both *habitual sentences* and *generic sentences* predicate of states of affairs that hold true at the moment of speech and aspectually they are *states*.

The Instantaneous Use of the Simple Present Tense

This use of the present tense portrays an event that looks simultaneous with the present moment *now* although the event (which has intrinsic duration) is treated as *perfective*. More often than not, this use of the present tense acquires a *dramatic value* and its duration is 'telescoped' to a point. The instantaneous use of the simple present tense occurs only with events (not with states) in certain easily definable contexts:

---in sports commentaries on the radio where the commentator is reporting something that the listeners cannot see:

(17) Napier takes the ball and runs down the wing. He passes the ball to Attwater. Attwater beats two men, he shoots. It's a goal!

---it is used in demonstrations, when the audience can see what is happening. Once again, the demonstrator is reporting the activity performed as perfected at the moment *now*. The use of the simple present tense is the only appropriate form in this context:

(18) Look, I take this cart from the pack and place it under the handkerchief – so!

---it is used in stage directions:

(19) He yields. The specter vanishes!

The Historical Value of the Simple Present Tense

The simple present tense may also be used with reference to the past. This use is best treated as a story-teller's *licence*, whereby past happenings are imagined as if they were going on at the present time. Its contexts of occurrence are:

---it is typical of a highly colored popular style of oral narrative and can be accompanied, with apparent incongruity, by an adverbial expression indicating past time:

(20) *Last week I am* in the sitting room with my wife, when this chap next door *staggers* past and in a drunken fit *throws* a brick through the window

---the simple present tense can also be used in fictional prose where we expect the use of the past tense to describe imaginary happenings. With some writers, transposition into the fictional present is a device of dramatic heightening; it puts the reader in the place of someone actually witnessing the events as they are described:

(21) Mr. Tulkinghorn *takes* out his papers, *asks* permission to place them on a golden talisman of a table at my Lady's elbow, *puts* on his spectacles, and *begins* to read by the light of a shaded lamp. (Dickens, 'Bleak House')

The Temporal Values / Uses of the Simple Past Tense

The Simple Past Tense with a Deictic Use

The simple past tense has a basic time association with a past moment of time, rendered by adverbs such as *then*, *yesterday*, *two hours ago*. The past tense is *deictically* interpreted (i.e., with respect to the moment of speaking *now*).

The simple past tense describes a situation that occurred before the present moment at a moment in the past understood as *definite / specific*; this definite past moment is usually indicated by the adverb. The past time adverbs most frequently associated with the past tense are *yesterday/last month/night/ year, the other day, once, two days ago, in the year 2000, in June, when I was a child*, etc.

The ATR of the past tense is [RT < ST, ET = RT].

The ART of the past tense explains why the eventuality is portrayed in its entirety – as including its initial and final bounds (i.e., perfective aspect). The described event is viewed in its entirety, because RT coincides with the ET, from its initial to its final boundary.

There are, however, contexts in which the time adverbial specification can be missing. This is possible only when the adverbial can be inferred and retrieved from the larger context:

(22) Ann: This time last year I was in Vienna

Bill: How curious! I was there too

Bill's answer is correct without a past tense adverbial because the missing adverb can be equated with the adverb mentioned in the preceding sentence (i.e., *this time last year*).

Another case in which a simple past tense sentence can occur without a definite adverb involves sentences like the following:

(23) a. Joan has received a proposal of marriage. It took us completely by surprise.
b. I have seen him already. He came to borrow a hammer

In such contexts, the *present perfect* is used to introduce an event that took place sometime before the moment of speech; once an anterior frame of reference is established it is natural to resume reference to the already introduced event by the simple past tense, which is thus uniquely identified.

The Non-Deictic Use of the Simple Past Tense

Beside its deictic usage, the simple past tense can also be used *non-deictically*. This use is specific to the *narrative mode* and the simple past tense occurs without a temporal adverb. The situations narrated happened before the moment of speech but this moment is not given and has to be identified as part of the information associated with the way narrative functions. Here are two examples that constitute the opening paragraphs of J. Joyce's "Eveline" and W. Golding's "Lord of the Flies":

(24) She sat at the window watching the evening invade the avenue. Her head was leaning against the window curtains, and in her nostrils was the color of dusty cretonne. She was tired.

(25) The boy with fair hair lowered himself down the last few feet of the rock and began to pick his way toward the lagoon.

Linguists have also identified *other uses of the simple past tense*: a) the habitual use; b) the past perfect use; c) the present time use.

The Habitual Value of the Simple Past Tense

In a habitual sentence such as (26), the frequency adverb *at noon every day* specifies the repeated ET of the predication. The adverbial *during his childhood* specifies RT, the past interval during which the recurring event took place:

(26) John got up at noon every day during his childhood

The Simple Past Tense with Past Perfect Value

Consider the sentences below:

(27) a. He enjoyed and admired the sonnets of Shakespeare
b. He knocked and entered
c. He shaved and listened to the radio

In (27a) we have the description of *state predicates*: states denote duration hence the sentence is understood to describe two simultaneous states. On the other hand, the sentences in (27b,c) describe two *events* that can be performed only sequentially (as a rule,

one first knocks and then enters). The event that is interpreted as taking place before another event in the past has a *past perfect value* – we have to do with a shifted reading of the simple past tense in the case of events.

The Simple Past Tense Referring to Present Time

In everyday conversation the simple past tense can be used with present time reference with no adverbial specification. Consider:

(28) A: *Did you want me?*
B: Yes, I *hoped* you would give me a hand with the painting

The use of the simple past tense with present time reference occurs mainly in questions, which are thus perceived as more polite and less pressing than the one in the simple present tense.

The Temporal Values / Uses of the Simple Present Perfect Tense

General Properties of the English Present Perfect Tense

The present perfect, as distinct from the simple past, is often described as referring to 'past with present relevance', or 'past involving the present'. Consider the contrast below:

(29) a. John read the book last year
b. John has already read the book

Both sentences involve reference to events that occurred prior to the moment of speech. The sentences in (29) show that past events can be predicated about either in the past tense or the present perfect but from two different perspectives. In (29a) we understand that John's reading the book in its entirety (a *perfective* eventuality) *is dated / is specified* as occurring during last year, which is prior and thus distinct from the moment *now*. In contrast, from (29b) we understand that John's reading the book in its entirety occurred *at some unspecified time in the past* but John's reading the book is related, and thus relevant to the present moment through its result: now, John knows what the book is about.

One of the widely accepted contrastive definitions of the past tense vs. present perfect is that proposed by McCoard (1978): "the preterit tense represents an action or state as having

occurred or having existed at a past moment or during a past period of time that is definitely separated from the actual present moment of speaking; the present perfect is analyzed as marker of prior events which are nevertheless included within the overall period of the present”.

Due to the extra dimension of meaning (i.e., the relation of the present perfect to the speech time) we say that the present perfect is *not* a perfective tense but a *perfect tense*. However, both perfective and perfect tenses describe completed eventualities; more technically, they are both *topologically closed* eventualities (Giorgi and Pianesi, 1997). The perfective past tense is topologically closed *before* the moment of speech while the perfect present perfect is topologically closed *at* the moment of speech.

The present perfect, as its name shows, is a paradoxical tense: it is half past (i.e., the unspecified ET is situated before ST), half present (i.e., RT is situated at ST, as indicated by the present tense marker on *have*). Thus its ATR is [ST = RT, ET < RT].

The perfect aspect has been treated in the linguistic literature as an *aspectual operator* (it changes the aspectual properties of the eventuality it operates on). The perfect operator can occur with and thus operate on all types of eventualities (e.g., *He has been here*, *He has sung*, *He has built a house*). The present perfect describes the *result(ant)* state of an eventuality. An event in the present perfect as in (58b) occurred at an unspecified ET in the past, and the perfect aspect *specifies* the state that results at ST after the culmination of the event. Thus, sentences in the present perfect are *derived state sentences*, different from past tense sentences, which inherit the aspectual properties of the main predicate (state, process or event).

In spite of the fact that both the past tense and the present perfect express relations of anteriority they evince highly restrictive combinatorial abilities when they occur with temporal adverbs (McCoard, 1978).

In essence, the past tense occurs with specific / definite time adverbs (e.g., *two months ago*, *last weekend*, *yesterday*, *after the war*, *at 4*, *on Tuesday*) while the present perfect occurs with non-specific / non-definite time adverbs (e.g., *since 3 o'clock*, *for 2 hours*, *so far*, *yet*, *lately*, *before now*).

The English present perfect contrasts with its equivalents in the large majority of languages in that it resists occurrence with specific temporal adverbs.

Compare: **John has come at 4 / yesterday / on Tuesday / before the war* with *Ion a venit la 4 / ieri / marți / înainte de război*. This inability of the present perfect to occur with definite adverbs is known as the ‘*Present Perfect Puzzle*’ (Klein, 1992).

The Values / Uses of the Simple Present Perfect

Linguists speak of four main uses of the present perfect: the *experiential present perfect*, the *continuative present perfect*, the *resultative present perfect* and the 'hot news' *present perfect*.

In current studies the experiential present perfect is renamed *Existential Present Perfect* while the continuative present perfect, the resultative present perfect and the 'hot news' present perfect all collapse under the *Resultative* or *Continuative Present Perfect* (Demirdache and Uribe-Etxebarria 2002, 2004). We adopt this terminology.

The two main values of the present perfect crucially depend on the *aspectual properties* of the eventuality (cf. Comrie 1976, Smith 1991, Kamp and Reyle 1993, Julien 2001, Demirdache and Uribe-Etxebarria 2002, 2004 among many others).

The Existential Value of the Present Perfect

Consider the following examples:

(30) a. Sam has broken my computer (twice) (accomplishment)
b. John has reached the top (twice) (achievement)
c. Susan has played the violin (twice) (activity)
d. Mary has lived in Cairo for three years (twice in her life) (state)

As can be easily noticed, in the present perfect sentences in (30) the eventuality is presented as 'bounded' since it can be repeated. We say that the present perfect has an *existential value*: it shows the existence of one or several eventualities (states, processes or events) that are presented as completed prior to the moment of speech (Demirdache and Uribe-Etxebarria, 2002). In (30d), the adverb *for three years* specifies the duration of two past eventualities (i.e., twice in her life Mary lived in Cairo for a period of three years). All the predications in (30) have current relevance at ST and they are interpreted as *states*.

The Resultative or Continuative Value of the Present Perfect

Consider the examples below:

(31) a. Oh! My God! Sam has broken my computer (accomplishment)
b. John has reached the top (achievement)
c. Susan has played the violin for two hours (now) (activity)

d. Mary has lived in Cairo for three years (now) (state)

In the sentences in (31), the present perfect induces a *resultative* or *continuative* reading: it presents a *state* as holding from a moment in the past up to and including the moment of speech. This value of the present perfect focuses on the *resultant state of an eventuality*.

Notice that the *resultative reading* obtains with predicates that describe *an accomplishment* (as in 66a) or *an achievement* (as in 31b). Thus, in (31a,b) the result state described by the sentence *SAM BREAK MY COMPUTER* or the sentence *JOHN REACH THE TOP* are presented as persistent at the moment of utterance. In other words, (31a) implies (the result) that my computer is broken at the moment of speech and (31b) implies that John has reached the top and is on the top of the mountain at the moment of speech. The result state is presented as still persisting at ST: it continues from a past interval up to the moment of speech.

The present perfect in (31d) indicates that Mary still lives in Cairo at the moment of speech. The adverb of duration shows that the state in question began three years before the moment of speech and this state still continues at the moment of utterance. The presence of the duration adverb *for three years* is obligatory and it measures the whole eventuality. Notice that the *continuative reading* obtains with a predicate that describes a *state* or an *activity*.

The 'Hot News' Value of the Present Perfect

The third value of the present perfect is the 'hot news' present perfect, dubbed as such by McCawley (1971). It is illustrated in (32). In present day studies on the present perfect this value is *not* identified as a separate value of the present perfect as it can be easily identified with the *resultative value* of the present perfect with an event predicate. The notion of recent past with a *resultative state* holding at the moment of speech is conveyed by the use of *just*.

(32) Malcolm Jones has just been assassinated!

Other Temporal Uses of the Present Perfect

The Future Value of the Present Perfect

In *adverbial clauses of time* the present perfect is used with a *future value*. Consider the sentence below:

(33) You can go when you have finished your work

The conjunctions commonly used to introduce the adverbial clauses of time are *when*, *as soon as*, *before*, *after*, *until*, *once*, *by the time (that)*, *the moment (that)*.

In some contexts, the use of the present perfect is in free variation with the present tense:

(34) I shall leave as soon as the meeting ends / has ended

In other contexts, the choice between the two tenses is not free:

--- when the events in the main clause and the subordinate clause temporally coincide the use of the present tense in the subordinate clause is favored, as in (35a) below; when the event in the subordinate clause occurs after the one in the main clause the use of the present perfect in the subordinate clause gives well formed sentences, as in (35b) below:

(35) a. Come over and see us when our guests leave
b. Come over and see us when our guests have left

Temporal Adverbs with the Present Perfect and the Past Tense

The temporal contrast between the present perfect and the past tense would not be complete unless we examine in detail the strong restrictions of the two tenses in terms of their occurrence with temporal adverbs.

A major contribution of McCoard's study (1978) is the detailed analysis of the way in which temporal adverbs relate to the present perfect and/or past tense. Adverbs bring in their temporal meaning and they bear on tense selection and even on tense interpretation.

McCoard identifies three classes of adverbs: those that occur with the simple past tense but not with the perfect, those that occur with either the simple past or with the perfect and those that occur with the perfect but not with the simple past.

Occur with the simple past but not with the perfect	Occur with either the simple past or the perfect	Occur with perfect but not with simple past
long ago	long since	at present
five years ago	in the past	up till now
once (= formerly)	once (= one time)	so far
the other day	today	as yet
those days	in my life	during these five years
last night	for three years	herewith
in 1900	recently	lately

at 3:00	just now	since the war
after the war	often	before now
no longer	yet	
	always	
	ever	
	never	
	already	
	before	

The adverbs in the first column refer to points or stretches of time that precede the moment of speech, either by their semantics or by context (e.g., *at 3:00*). The adverbs in the third column coincide or are oriented to the moment of speech. In context, these adverbs can be thought of as beginning before the moment of speech and extending beyond it. They only occur with the present perfect and exclude the past tense. For the adverbs in column two, it is the context and in particular the tense used which decide which time-sphere (past or present) is actually being referred to. They are 'neutral' time-span adverbs (Fenn, 1987).

As far as the adverbs in column two are concerned, the following comments are in order.

The duration adverb *for*-phrase (e.g., *for three years*) measures the duration of a homogeneous eventuality (state or activity, never an event) whether it is in the past tense or the present perfect (e.g., *He sang for a couple of minutes / I have known him for years / *John has built the house for two years / *John built the house for two years*).

In contrast with *for*-phrase, *since*-phrase "marks the beginning of the period and the moment of utterance marks the end" (Heinamaki, 1978) and it only occurs with the present perfect with either states or events. The inclusive *since*-phrase together with the eventuality in the present perfect relates the predication to the moment of speech (e.g., *John has been here since 3 o'clock / John has worked in the garden since morning / Since last summer John has moved to Paris*).

Ever and *never* are used when the life experience of the subject is predicated about. Both suggest the meaning '*within a period of time*'. When they occur with the present perfect it is the present perfect that relates their time-span to the moment of speech (e.g., *A saner and more practical man I've never met*). On the other hand, their '*within a period of time*' meaning also makes them compatible with the past tense (e.g., *I never saw the St. Patrick's Day Parade while I was in New York*).

Adverbs such as *often*, *always*, *sometimes*, which refer to frequency can, depending on the context occur with either the present perfect or with the past tense (e.g., *I have always suspected your honesty / He always made a lot of fuss about nothing when they were married*).

Lately and *recently* are commonly regarded as synonyms but they show different compatibility as to their occurrence with the past tense and the present perfect. *Lately* accepts only the present perfect (e.g., *I have spent a great deal of money lately* / **I spent a great deal of money lately*) while *recently* goes with both the past tense and the present perfect (e.g., *I have been ill recently* / *I was ill recently*).

Adverbs such as *today*, *this week*, *this year* can occur with both the present perfect and the past tense (e.g., *I have seen John this morning* / *I saw John this morning*). Both sentences convey the meaning that “the act occurred *within* the time span *this morning*. The difference lies in whether the event is viewed simply as a factor of experience obtaining at the moment of speech [with the present perfect] (i.e., the morning time-span is not over) or whether it is viewed within the context of the time at which it occurred [with the past tense] (i.e., the morning time-span is over)“ (Fenn, 1987).

The difference in uses between adverbs such as *just* and *just now* is the following. *Just* can take either the present perfect or the past tense (e.g., *I have just seen your sister* / *I just saw your sister*) while *just now*, which is interpreted as a *moment/second/minute ago*, can only occur with the past tense (e.g., *I saw your sister just now*).

Finally, there are adverbs that combine with either the present perfect or the past tense but with a clear difference in meaning. *Now* is mainly associated with present tenses: *Now my ambition is fulfilled* / *has been fulfilled*. With past tense, it is a narrative substitute for *then* (= ‘at this point in the story’): *Now my ambition was fulfilled*.

Once, with the meaning ‘on a certain occasion, at one time’ occurs with the past tense, despite its indefinite meaning: *He was once an honest man*. In a present perfect sentence it has a numerical value contrasting with *twice*, *three times*, etc: *I have visited the Highlands only once* (Leech, 1971).

Already, *still*, *yet* and *before* occur with the present perfect in the sense ‘as early as now’, ‘as late as now’: *I have seen him already* / *I (still) haven’t seen him (yet)*. With the past tense they must have a meaning involving a past point of orientation: *I was already* (= ‘as early as then) *very hungry* (Leech, 1971).

The Temporal Values / Uses of the Past Perfect

General Properties of the Past Perfect Tense in Simple Sentences

Consider the following sentence in the past perfect where the event of Mary's leaving the school is viewed as completed before a past reference time:

(36) Mary had left school

The ATR of the past perfect is [RT < ST, ET < RT]. Since ST follows RT, which itself follows the ET, the event of Mary's leaving the school is viewed as completed before a past reference time.

In complex sentences, the main clause can establish the past RT of the subordinate past perfect clause, as in the example below:

(37) a. They told us yesterday that Tom had arrived 3 days earlier
b. *Tom had arrived 3 days earlier

Sentence (37a) is well formed because the adverb *yesterday* in the main clause also establishes the RT of the embedded clause: we understand that Tom's arrival occurred 3 days prior to yesterday. The embedded clause specifies a time other than RT, namely ET. Thus, while the adverb in the main clause specifies RT for both clauses, the adverb in the embedded clause specifies only its ET (and its RT is shared with that of the main clause). Notice that sentence (37b) is ungrammatical because it contains an adverbial and a tense marker that together cannot establish RT.

Means of Expressing Future Time

General Characteristics

The auxiliary verbs *shall* and *will* used to convey future tense in Modern English were, in older stages of English, full verbs. *Shall* meant 'I must, I am under the obligation' and *will* meant 'I want'. 'Obligation' and 'want' are oriented to a future time sphere. In the course of time these verbs developed into auxiliary verbs that signaled both modality (i.e., possibility / probability) and futurity. In Modern English they retain both a temporal and a modal value but many other linguistic means are being used to render future time more explicitly. There are also some differences and nuances of usage that distinguish among these means.

The ATR of the future tense is [ST < RT, ET = RT] irrespective of the linguistic means that render it.

Leech (1971) lists the following linguistic means that express futurity in Modern English; these means belong either to the modal system or to the aspectual paradigm.

- a. The present tense + future time adverbs: e.g., Exams start tomorrow
- b. The present progressive: e.g., The parcel is arriving tomorrow
- c. Will/shall + infinitive: e.g., The parcel will arrive tomorrow
- d. Will/shall + progressive infinitive: e.g., The parcel will be arriving tomorrow
- e. Be going to + infinitive: e.g., The parcel is going to arrive tomorrow

The Simple Present Tense with Future Time Adverbs

Consider the following examples:

(38) a. Tomorrow is Thursday
b. I leave early tomorrow morning
c. I am off tonight

The future time meaning of the simple present tense refers to a future occasion: at the moment of speech the speaker anticipates an event or a state that is to take place at a RT = ET that is after/posterior to ST. The present tense with future time adverbs is used in situations when the event is *scheduled by external factors*, i.e., there is a decision taken or plan fixed according to some external authority.

The Present Progressive with Future Time Adverbs

Consider the following example:

(39) I'm starting work tomorrow

The present tense progressive plus future time adverbs is used when an element of *human volition* is involved and it has the flavor of a *planned, arranged action* that takes place in the future. The sentence in (40b) below is ill formed because no conscious, human agency is involved:

(40) a. John is rising at 5 tomorrow
b. *The sun is rising at 5 tomorrow

Present progressive sentences with future time adverbs also convey a sense of *imminence* that is absent from the use of the simple present tense with future time adverbs:

(41) a. The Smiths are leaving tomorrow
b. My aunt is coming to stay with us this Christmas

Palmer (1978) contrasts the use of the simple present tense form with the present progressive form with future time adverbs in the following terms. Consider first the sentences:

(42) a. I'm starting work tomorrow
b. I start work tomorrow

"The first sentence suggests that the speaker now expects or intends to start work – he may perhaps, have been ill. The second indicates that tomorrow is the time fixed for him to start, e.g., by his firm or by the doctor".

Will and Shall plus the Infinitive

Traditional grammars have interpreted modal auxiliaries *will* and *shall* as means of expressing future tense. In fact, the contribution of these modal verbs in sentences as in (42) below (without temporal adverbs) is *modal*, i.e., that of making *predictions*:

(43) a. Allan will be in Bucharest
b. Tomorrow's weather will be cold and windy
c. You will feel better after you take this medicine

It is evident that *will/shall* also refer to future predictions due to their modal nuance. As said above, the mixture of modal and temporal values of these modal verbs is due to the diachronic development of English: at the beginning *will/shall* had only modal values and in time they also developed a future reading when they occur with *future time adverbs*. Leech (1971) makes the following comments with respect to their usage: "frequently a sentence with *will/shall* is incomplete without an adverbial of definite time: **It will rain* / **The room will be cleaned*. These sentences are relatively unacceptable on their own, presumably because of their factual emptiness: we all feel certain that 'it will rain' at some time in the future, so there is no point in saying 'it will rain' unless an actual time can be forecast".

Will and Shall plus the Progressive Infinitive

Consider the following examples:

(44) a. This time next week I shall be sailing across the Atlantic
b. Don't call me at 9 – I'll be eating my supper

In the first sentence in (44a) the verb is in the progressive form and the modal *shall* contributes its (modal) predictive sense. Therefore, the sentence *predicts* that *this time next week* the activity of sailing across the Atlantic will be in progress. The prediction is made with such a great degree of certainty that the event is presented as unfolding at a specified future reference time. The same explanation can be considered for the second sentence. Thus, the future interpretation of the sentences does not result from *will/shall* plus progressive infinitive, but from the adverbial specification in the sentences.

Be Going To

Consider the following example:

(45) I'm going to call him

Be going to is a frozen form that cannot be analyzed into two separate verb forms: it is listed as such in the lexicon. Jespersen (1931) remarks that the structure *is going to* derives from the progressive form of the verb *to go*: “*going* loses its meaning as a verb of movement and becomes an empty grammatical word”. The same process occurred in French with the form *je vais faire*. In contemporary English, *be going to* is mainly used in colloquial speech.

The basic meaning of *be going to* is that of “*future fulfillment of the present*” (Leech, 1971).

Leech (1971) identifies two extensions of this general meaning of *to be going to*:

---the first one is ‘the future fulfillment of the present intention’ that is found with human subjects who consciously exercise their will:

(46) What are you going to do today? I am going to stay at home and watch television

On this reading the sentence *I am going to watch television* is felt as stronger than *I intend to watch television*.

---the second extension of the general sense of *be going to* can be stated as 'future fulfillment of present cause'. This sense is common with both agentive and non-agentive verbs:

(47) a. She is going to have another baby (i.e., she is already pregnant)
b. I think I'm going to faint (i.e., I already feel ill)
c. There's going to be a storm in a minute (i.e., I can see the black clouds gathering)

Notice that *be going to* can also be used when speaking about periods remote from ST:

(48) a. I'm going to be a policeman when I grow up
b. If Winterbottom's calculations are correct, this planet is going to burn itself out 200,000,000 years from now

The Future of Past Situations

In case the sentence has a *past time sphere*, all the future time expressions are modified to indicate a future plus past situation (i.e., *future in the past*):

(49) a. He was leaving town the day after we arrived
b. He was going to be a policeman later in his life

Palmer (1979:130) remarks that "for future in the past, *be going to* is regularly used", while in literary style *would* is likely to occur (Leech, 1971):

(50) a. *I was going to* say that it looked a bit like a pheasant in flight
b. Twenty years later, Dick Whittington *would be* the richest man in London

To the above-mentioned expressions of futurity in English we can also add the following: *to be about to* (used to express imminent future situations; it is less colloquial than *to be going to*), *to be ready to*, *to be near to*, *to be on the point of/on the verge of/on the brink of*:

(51) a. He *was about to* retrace his steps when he was suddenly transfixed to the spot by a sudden appearance
b. His finger was upon the trigger and he *was on the point of* fire
c. He *has been on the brink of* marrying her

7. MODALITY AND MODAL VERBS

Key notions: modality, deontic, epistemic

Introductory Remarks

Modal expressions are linguistic expressions that allow people to talk about alternative states of affairs. These states of affairs are thought of as not present in the current situation and may never occur in the actual world.

Typical examples of *modal expressions* are the modal verbs *can*, *may*, *must*, *will*, *shall*, *could*, *might*, *would*, *should*, *ought to*, *need* and *dare* and the grammatical category of mood (roughly the *indicative mood* versus the *subjunctive mood* distinction).

Besides modal verbs and verbs that require the use of the subjunctive in the subordinate clause (such as *assume*, *believe*, *fancy*, *fear*, *feel*, *guess*, *hope*, *imagine*, *presume*, *reckon*, *surmise*, *suspect*, *think*, *trust*, *declare*, etc.), various *nouns*, *adjectives* and *adverbs* can also express *modal concepts* and *attitudes*:

Nouns: allegation, hypothesis, command, exhortation, request, assumption, certainty, doubt, expectation, etc.

Adjectives: sure, certain, possible, necessary, probable, compulsory, imperative, lawful, legal, permissible, etc.

Adverbs: allegedly, certainly, conceivably, evidently, likely, necessarily, obviously, possibly, presumably, probably, seemingly, surely, etc.

On Root and Epistemic Meanings of Modal Verbs

Modal auxiliary verbs such as *can*, *may*, *must*, *could*, *might*, *should*, etc. are verbs with weak, incomplete semantic content. Their interpretation is highly dependent on the (linguistic and non-linguistic/pragmatic) context in which they occur.

In the linguistic literature it is acknowledged that modal verbs are used to communicate at least two clusters of meaning: *the root (or deontic) meaning* and *the epistemic meaning*.

The *root meaning* roughly deals with the necessity or possibility of acts performed by morally responsible individuals (i.e., agents) and covers notions such as *obligation*, *volition* or *permission*.

The *epistemic modal meaning* deals with the possibility or necessity of *an inference* drawn by the subject from available evidence and covers notions such as *necessity*, *probability* and *possibility*.

It is commonly the case in English that one single modal verb is capable of conveying both root and epistemic modal meanings. Consider:

(1)	a. Employees <i>must</i> feed the animals twice a day	(obligation)
	b. Whoever has finished <i>may</i> go	(permission)
	c. You <i>should</i> be grateful to your parents for their support	(moral obligation)
	d. I <i>will</i> do it no matter what	(volition/threat)
(2)	a. You <i>must</i> be John's wife	(necessity)
	b. It <i>may</i> rain later in the afternoon	(possibility)
	c. Bioethics lectures <i>should</i> prove interesting	(probability)
	d. A lion <i>will</i> attack a man when hungry	(probability)

Morpho-syntactic Properties of Modal Verbs

Because of their morpho-syntactic properties, modal verbs form a special class of auxiliary verbs. Their properties set them apart from both lexical verbs and the other class of auxiliaries (i.e., the aspectual auxiliaries *have* and *be*).

The most striking characteristics of the English modals are the so-called **NICE** properties (Huddleston, 1976) (NICE is the acronym from Negation, Inversion, Coda and Emphasis properties of modals).

The following properties distinguish the English modals from lexical verbs:

- (i) **Negation** can attach to the modal, without *do*-support:
- (3) I cannot come / *I do not can come
- (ii) **Inversion** of the subject with the modal is obligatory in interrogative sentences and in tags; *do* cannot be inserted:
- (4) Must they leave? / *Do they must leave?
- (5) You can speak English, can't you? / You can speak English, *don't you?

(iii) Modals can appear in the “**coda**”:

(6) I can come and so can Bill / *I can come and so does Bill

(iv) **Emphatic affirmation** is possible, again without *do*-support:

(7) You shall have the money by tomorrow! / *You do shall have the money by tomorrow!

The following properties distinguish the modal auxiliaries from the aspectual auxiliary verbs *have* and *be*:

(i) modals lack conjugation:

(8) *He cans swim / I am swimming / He has written

(ii) modals cannot be followed by non-finite forms:

(9) *He can to swim / *He can swimming / He has left / He is writing

(iii) modals always select a short infinitive as their complement:

(10) He can (*to) swim

(iv) like aspectual auxiliaries, modal auxiliaries may have both past and present tense forms (see 24); some of them have a past tense form that can only be used in reported speech (see 25):

(11) They can play the piano / He could play the piano when he was young

(12) The boss said he might go right away

(v) modals have no passive form

(vi) modals have no imperative form

(vii) modals cannot co-occur (with the exception of some dialects):

(13) *You might would say that

Hoffman (1976) also noticed a systematic syntactic distinction between the epistemic and the root interpretation of modal verbs.

When modal verbs are interpreted epistemically (when they span notions such as possibility, probability, and logical inference) they evince the following syntactic patterns:

(i) with this interpretation, modals can occur in the progressive aspect:

(14) He can be singing now

(ii) with this interpretation, modals can occur with the perfect infinitive form:

(15) He must have already left

(iii) with this interpretation, modals have no selection restrictions on the subject:

(16) The apple/the boy must have fallen from the tree

When modal verbs are interpreted deontically (i.e., their meaning spans notions such as permission, obligation, volition, ability, etc.) they cannot occur in the progressive aspect or with the perfect infinitive form:

(17) *He can be singing now (no ability interpretation)

(18) *He must have already left (no permission interpretation)

Rather, deontic/root modals have a future time orientation:

(19) a. You may sing now (permission)
b. You must leave now (obligation)

This is explained in the following terms. A responsible agent typically grants permission for an activity that will be carried out in the future (not the past or the present); the same goes for

imposing ‘obligation’. More often than not root modality is associated with activities while epistemic modality is associated with events (Papafragou 2000).

It has also been pointed out that root modals impose selection restrictions on the subject: the subject should be animate.

(20) *My car must leave now (no obligation interpretation)

This is so because deontic modals, which communicate permission, obligation, etc., involve an agent responsible for carrying out the relevant activity. However, this generalization is not absolute. Consider the following examples:

(21) a. There must be law and order in the country
b. The table should be ready for dinner before 7

In what follows we present a detailed description of the modal verbs *can*, *may*, *must*, *will*, *shall*, *could*, *might*, *ought to*, *would*, *should*, *need* and *dare* on both their deontic and epistemic interpretations when their modal bases are *not* linguistically indicated but must be inferred from the context.

CAN

Traditional grammarians (Leech 1971, Palmer 1979, Jespersen 1931, Poutsma 1926) have identified three main modal meanings of CAN: *ability*, *permission* (root/deontic meanings) and *possibility* (epistemic meaning).

Ability CAN (root meaning)

On its root/deontic interpretation, CAN refers to both physical and mental *ability*:

(22) a. He can lift a hundredweight
b. John can swim like a fish
c. Can you speak English?

The ability sense of CAN may be easily included in the broader ‘potentiality’ meaning of CAN with a present or future time orientation. Consider the following contrast:

- (23) John is swimming
- (24) John can swim

In (23), the speaker asserts that John is now engaged in an ongoing activity of swimming. In (24), the speaker does not assert that John is actually swimming now. Sentence (24) conveys the meaning that the speaker has in mind some sets of circumstances that include previous occasions on which John demonstrated his ability to swim. These previous occasions are such that they do not preclude a similar occurrence in the future.

Due to its general interpretation of potentiality root CAN may also indicate various kinds of acts such as *suggestion*, *offer* or *request*:

- (25) We can meet one day after work (suggestion)
- (26) I can give you a lift (offer)
- (27) a. Can you just remind me? (request)
- b. Can you give me a hand with the painting? (request)

These types of interpretation require the presence of a collection of contextual assumptions that involve both the hearer and the speaker. In (25) and (26), the embedded proposition p represents a state of affairs that is desirable to the hearer from his own point of view as well as beneficial to him. On the other hand, the speaker has the responsibility for bringing about the state of affairs described in p but no obligation to do so. In (27a,b) CAN is used in an interrogative sentence that has *you* as subject. In this case, the interrogation does not function as a genuine question that elicits information, but as a request addressed to the hearer.

It was long ago noticed that in many contexts deontic CAN may occur when BE ABLE TO does since both are related to circumstances that do not preclude an activity from occurring:

- (28) a. He can / is able to lift a hundredweight
- b. Our team can / is able to beat your team

However, the two verbs are not always interchangeable. While CAN really shows general 'potentiality', BE ABLE TO rather specifies the subject's ability *to accomplish a certain task* under specific circumstances.

(29) a. In this way we are able to carry our research and not simply to undertake consulting
b. We are able, in mathematical terms, to find the optimum solution

However, BE ABLE TO is preferred to CAN under the following conditions (Palmer 1979):

- (i) since CAN has no non-finite forms, only BE ABLE TO is available after other modal verbs: *should be able to*, *might be able to*, *must be able to*.
- (ii) BE ABLE TO is more formal than CAN and tends to be used especially in written texts.
- (iii) if the temporal reference of the sentence is past and if the situation is a single accomplished occurrence, only BE ABLE TO is allowed:

(30) I ran and I was able to catch the bus
(31) *I ran and I could catch the bus

Permission CAN (root meaning)

Beginning with the 18th century CAN has come to be used with the sense of permission. With this meaning it has tended to replace MAY:

(32) a. You can go now
b. You can smoke in this room

In (32) the state of affairs described by the proposition p is desirable from the hearer's point of view. The speaker has authority over the hearer but it is in the hearer's power to bring about this state of affairs.

In present-day colloquial English CAN with permission interpretation is more widely used than MAY although it is perceived as less polite than MAY. CAN has the less specific meaning of 'you have permission' rather than the more specific one of 'I grant you permission'. The sentence *You can smoke in this room* simply means that rules/regulations allow smoking in this room:

(33) Mr. X: Can I smoke in here?

Mr. Y: So far as I know you can – there is no notice to the contrary

However, permission CAN is not always used for granting permission to the benefit of the hearer. Consider the sentences in (34):

- (34) a. You can forget about your holidays
- b. If he doesn't like it he can lump it
- c. You can jump in the lake

All the sentences in (34) are more or less offensive and their impolite tone contains an ironical touch: the speaker offers the hearer a choice that is not convenient or desirable from the hearer's point of view.

In the same line, a suggestion made by the speaker to the hearer is so sarcastic that the suggestion is interpreted as a *command* of a brusque and somewhat impolite kind:

- (35) a. You can leave me out, thank you very much
- b. You can start looking for another job!

The explicit *future time reference* of *ability* CAN is rendered by the future tense of BE ABLE TO:

- (36) He'll be able to run a mile in 4 minutes next year

while the explicit *future time reference* of *permission* CAN is rendered by the future tense of the verbs *permit* or *allow*:

- (37) I shall allow/permit you to talk with her

The *past time reference* of *ability* and *permission* CAN is conveyed by COULD:

- (38) a. Your mother was out and couldn't have the key (past ability)
- a'. Why was the house so cheap? No one could get a mortgage on it
- b. He said I could leave the next day (past permission)
- b'. She said that, if he wanted, he could come

COULD may also acquire a *habitual interpretation* when a recurrent event in the past is intended:

(39) My father could usually lay hands on what he wanted

However, deontic COULD does not exclusively cover the past time sphere of various actions. COULD may describe ideals of action or behaviour in subsets of its modal base (i.e., ordering source) that are closer and more similar to the way the world should be. In this case, the time sphere of COULD is present or extended present. Consider the following examples:

(40) a. Do you think you could command an army? (ability)
b. I could do it with the right moral support (ability)
c. He could go if he wants to (more polite form of granting permission)

This use of COULD is also called 'hypothetical' COULD (Leech 1971).

Possibility CAN (epistemic meaning)

As already said, possibility CAN is more frequently used in non-assertions, that is, in negative and interrogative sentences:

(41) a. He can't be that stupid!
b. Can she be that old?

In affirmative sentences, epistemic (possibility) MAY is preferred:

(42) a. Michael may well get his degree next year
b. He may have been joking when he said that

Remember that epistemic CAN, unlike deontic CAN, may occur in the progressive aspect:

(43) You can be standing on it, so be careful!

The *past time reference* of epistemic CAN is rendered by CAN + the perfect infinitive form of the main verb:

(44) a. He can have been hiding at that time, you know
b. Poor devil, he can't have been too happy either
c. Can you have made such a mistake?

In hypothetical situations, COULD may acquire an epistemic interpretation covering a present or extended present time sphere:

(45) a. There could be trouble at the match tomorrow
b. You could try to be a bit more polite

In (45b) COULD is used to convey reproach and the sentence is paraphrased as 'it would be possible for you to be a little more civilized but in fact you don't behave yourself'.

Hypothetical COULD may also combine with the perfect infinitive form of the main verb (it is the perfect infinitive that carries the past tense marker of the sentence while COULD is interpreted hypothetically):

(46) You could have given me some notice (but you didn't)

The combination in (46) leads to a 'contrary-to-fact' interpretation and is contextually used as a complaint about a past omission.

MAY

The modal verb MAY is used with two different interpretations: a *permission* (root) interpretation and a *possibility* (epistemic) interpretation.

Permission MAY (root meaning)

Permission MAY is perceived as more polite than permission CAN because it includes the speaker's preferences and conveys a greater involvement on the part of the speaker. Consider the following example:

(47) During the seminar, you may interrupt as often as is needed

Suppose that the person who teaches the seminar addresses his class with the sentence above. The teacher makes it manifest that students are in a position to interrupt as long as he does not object. (The modal base of the sentence is thus, the teacher's own preferences). Given that interrupting the seminar as often as is needed is also desirable from the students' point of view and that the teacher has some authority as far as leading the seminar is concerned, (47) conveys a *permission* interpretation.

However, it is not the case that MAY is always felt to be polite. Imagine that a general utters (48) thus interrupting a soldier who is talking:

(48) You may go home, Jones

In this context, Jones does not consider going home as desirable from his own point of view; actually, the fact that Jones was in the middle of talking rather makes manifest the opposite assumption (i.e., that he does not wish to leave immediately). The utterance is perceived as *rude* because the general ignores the hearer's preferences, although they are contextually salient.

When permission is granted *in the future* the future tense of *be allowed to* or *be permitted to* is used:

(49) He'll be allowed to/permited to leave the hospital in two weeks time

The *past time reference* of permission MAY is rendered by MIGHT, used in reported speech:

(50) He said she might leave

MIGHT is also used to convey *hypothetical, formal / very polite requests* in the present:

(51) Might I have a light, please?

Possibility MAY (epistemic meaning)

MAY has a possibility interpretation in contexts such as:

(52) a. A friend may betray you
b. If he should marry, it may well be that his wife would like a house of her own

- c. Perhaps she may be his daughter, though he is not married
- d. Careful, that gun may be loaded

MAY on its possibility interpretation indicates that evidence available to the speaker is such that the sentence is not currently assumed to be true but nor can it currently be false. MAY focuses primarily on *the current verifiability* of the truth of the sentence.

The *past time reference* of epistemic MAY is conveyed by MIGHT + perfect infinitive forms:

(53) He may have left earlier

Hypothetical possibility MIGHT is used to render polite suggestions in the present:

(54) We might meet again after Christmas if you like

In familiar speech MIGHT is also used in reproaches (as COULD may):

(55) a. You might stop grumbling at me, for a change!
 b. You might help me with the luggage

The assumption is that although it is possible for you to stop grumbling at me, you don't.

In the past, hypothetical epistemic MIGHT + perfect infinitive form acquires a contrary-to-fact interpretation (in fact, the event did not take place):

(56) a. Arthur might have taken it away again
 b. You might have told me about it in due time

The sentence in (56b) means that although you had the possibility/opportunity to tell me about it in due time, you didn't. The sentence qualifies as a complaint or reproach about a contrary-to-fact situation.

MUST

The modal verb MUST has both a root/deontic meaning (*obligation*) and an epistemic meaning (*necessity, logical deduction*).

Obligation MUST (root meaning)

When MUST is used in a context relative to the system of social laws and a person is in a position of authority MUST is interpreted as indicating *obligation* or *compulsion*:

- (57) a. You must be back by 10 o'clock
- b. Tell him he must stop this dishonest behavior
- c. She must be made to do it
- d. You must get in permanent jobs

A variant of the 'obligation' interpretation of MUST arises in cases of *quasi-imperative suggestions* or *offers*:

- (58) a. We must go for a drink some day
- b. You must come and visit us sometime

The first sentence in (58) conveys the meaning that the speaker's desire is that he and his addressee go for a drink one day. Since the addressee most probably shows sensitivity to his interlocutor's desire (due to the social rules governing their relations), the sentence is interpreted as an urgent form of *suggestion* / *offer*.

Moreover, there is also a *sarcastic* or *ironical usage* of MUST in *Must you make that dreadful noise?* (i.e., For heaven's sake, stop it!) or in *If you must behave like a savage, at least make sure the neighbors aren't home.*

Contextually, MUST can be used as a *firm piece of advice* almost equivalent to an imperative, as in *You must keep everything to yourself, be discrete!*

HAVE (GOT) TO is a synonym of deontic MUST and indicates *external compulsion* while MUST itself implies *internal compulsion*.

- (59) a. I have to be at the airport at four
- b. There is a whole lot of literature you've got to read
- c. He's got to go into hospital, you know

The examples in (59) contain both instances of HAVE TO and HAVE GOT TO. According to Palmer (1979) there are two points of difference between these forms:

- (i) HAVE TO is more formal; HAVE GOT TO is generally used in spoken language.
- (ii) HAVE GOT TO has no non-finite forms (the forms *to have got to, *having got to do not exist); instead, the forms of HAVE TO must be used: *to have to*, *having to*.

The negative forms of HAVE TO and HAVE GOT TO are distinct from each other: the negative form of HAVE TO is *does / do / did not have to* while that of HAVE GOT TO is *has / have / had not to*:

(60) a. They haven't got to juggle about. They've got the total page copy
 (They are *not obliged* [to juggle about])
 b. You don't have to pay that fine
 (You are *not obliged* [to pay that fine])

Negation of Obligation MUST

When deontic (obligation) MUST is negated the paraphrase of MUST assumes wide scope with respect to negation:

(61) They must not (mustn't) leave (interdiction)
 'It is required that they do *not* leave'

When modality itself is negated there is no appropriate form with MUST and NEED NOT (NEEDN'T) is used:

(62) You needn't pay that fine (lack of interdiction or obligation)
 'You are not obliged to pay that fine'

If *future time reference* is explicitly made the forms *will / shall have to* are used:

(63) a. Well, I'll have to think about it
 b. I shall have to go into total silence for half an hour

The time sphere of MUST itself is present or extended present and it conveys a sense of 'internal' obligation:

(64) a. We must do something about it
b. You must tell me the truth at once

The *past time reference* of deontic MUST is taken over by HAD (GOT) TO and no distinction between internal vs. external obligation is retained:

(65) a. She had to sleep in the kitchen last night
b. In his youth he had to work hard for a living
c. He gave the children their presents in early December but they didn't have / hadn't got to open them until Christmas day

In reported speech, however, the difference in interpretation between MUST and HAVE (GOT) TO is retained and MUST is retained as such:

(66) a. She said he must go
b. She said he had to go
c. He had trifled with life and must now pay the penalty

Necessity MUST (epistemic meaning)

Consider the following examples:

(67) a. In opening a game of chess, the players must move a pawn
b. The president must formally approve the new Government before it can undertake its duties
c. The accused must remain silent throughout the trial

Sentence (67a) expresses a *necessity* with respect to the rules of chess, (67b) a *necessity* with respect to the Constitution and (67c) a *necessity* with respect to judicial rules (Papafragou, 2000).

In other contexts, the epistemic use of MUST occurs relative to the system of rational laws as a *necessary conclusion*: “knowledge arrived at by inference or reasoning rather than by direct experience” (Leech, 1971:148). Consider the following relevant examples:

(68) a. He must be working late in his office

- b. There must be some mistake
- c. You must have left your handbag at the theatre

In each case, a chain of logical deduction can be postulated: given the evidence, there can be no other conclusion. Thus, MUST represents the strongest epistemic judgement one can make; but making the strongest of all judgements is not the same as making a factual assertion.

TO BE ABOUT TO serves as a non-modal expression that in most occurrences has an epistemic interpretation that runs parallel to epistemic MUST. Consider:

(69) a. It's bound to come out
b. Self exploration and exploration in a small group at that level of complexity and so on is bound, it seems to me, to generate special languages

However, there is a difference in the meaning of BE BOUND TO and MUST. Consider (70) and (71) below:

(70) John's bound to be in his office
(71) John must be in his office

Sentence (70) is the more certain of the two. It has little or no sense of 'logical conclusion'. In (71), the presence of MUST indicates that the speaker draws the most obvious conclusion (because, for instance, the lights were on in John's office).

WILL

There are four modal bases in which WILL can be evaluated. We distinguish between *volition WILL*, *power WILL*, *habitual WILL* (root meanings) and *probability WILL* (epistemic meaning). Remember that the auxiliary verbs WILL and SHALL were full lexical verbs in older stages of English. SHALL meant 'I must, I am under the obligation' and WILL meant 'I want'. In the course of time these verbs developed into auxiliary verbs that signaled both modality (i.e., possibility / probability) and futurity. In Modern English they retain both a modal and a temporal value.

Volition WILL (root meaning)

The volitional use of WILL expresses *want* or *wish*.

Volition WILL has the following characteristics:

- (i) it is used to express actual volition (i.e., with respect to the present).
- (ii) volition WILL is subject-oriented, i.e., the want rests with the subject of the sentence.
- (iii) in case a future time is intended, it is separately indicated in the sentence (e.g., *I will write tomorrow / We'll celebrate this tonight*).

It has often been noticed that WILL expresses not only pure 'want' but also 'determination, 'resolve' to carry something out. Thus, a sentence such as:

(72) I will do that

means "I am willing or determined to do that, and I shall do it".

Volition WILL with *first person subject* may convey, function of the context, a *promise* or a *threat*:

(73)

- a. You shall sign a statement.....I will bring it with me for you signature, when I come again
- b. Marry me and I will save you life
- c. I will begin again

The affirmative form *you will* is used as a *request* or *order*, most often to a subordinate person

(74) You will put the box into the van

Volition WILL in the *second* and *third person* is most commonly used in *conditional clauses* after *if* and *unless*. In these contexts, WILL expresses *willingness* rather than determination:

(75)

- a. I shall be glad *if* he will come
- b. I shan't be happy *unless* she will come

The *past time reference* of WILL in reported speech is WOULD or the past tense of *be willing to*:

(76) I asked him whether he would it / was willing to do it

WOULD is also used as a *hypothetical* marker of volition WILL when it expresses formal or polite requests in the present or extended present time:

(77) a. Would Mr. Smith come to the information desk?
b. Would you pass the dictionary, please?

These are not genuine questions asking for information about the hearer's will; rather, they are formal, polite requests for action undertaken by the hearer.

Hypothetical volition WOULD is also used in the following characteristic contexts:

(i) in subordinate adverbial clauses of condition introduced by the conjunction *if* and *unless*:

(78) a. If you would sit by me every night I shall work better
b. I dare say she would prefer to go
c. If she would prefer to go she would go

(ii) in complement clauses after a verb expressing wish:

(79) a. I wish he would stop that noise
b. I wish he would come soon
c. I wish the snow would melt

Power WILL (root meaning)

Power WILL is used with inanimate objects and 'indicates how such objects will characteristically behave' (Palmer, 1979):

(80) a. The boat will hold only half of these

- b. Will the ice bear?
- c. The hall will seat five hundred people

Both volition WILL and power WILL are subject-oriented, i.e., the source of 'will' or 'power' is seen as intrinsic to the subject of WILL.

The *past tense* reference of power WILL is conveyed by WOULD:

(81) I tired hard but the door wouldn't open

Hypothetical power WOULD is used with inanimate subjects in the present or extended present:

(82) a. A house in London would cost a lot of money
 b. The hall would seat 100 persons

Habitual WILL (root meaning)

Habitual WILL is used to state that, given certain empirical circumstances, a situation regularly or occasionally takes place as a consequence of a natural tendency of a person or object:

(83) a. A falling drop will hollow the stone
 b. Boys will be boys
 c. A cat will often play with the mouse before she kills it

The *past tense* of habitual WILL is rendered by WOULD or USED TO with the following difference in meaning: the form USED TO only correlates with past time reference while WOULD is not thus restricted. Consider:

(84) a. I used to mow the lawn
 b. I would mow the lawn

Sentence (84a) communicates a habitual activity in the past. Sentence (84b) communicates a habitual activity in the past only if a past time index is added (such as *when I was young*); otherwise iterativity may also hold in the present.

Probability WILL (epistemic meaning)

In a sentence such as:

(85) You will be John's daughter

the circumstances are interpreted as evidence that the addressee is most probably John's daughter. Consider other examples:

(86) a. This will be the tower of London, I suppose
b. Mother will be expecting me and will be getting uneasy
c. That will be the postman

The epistemic interpretation of WILL is naturally suited to scientific and quasi-scientific statements:

(87) a. A lion will attack a man when hungry
b. Truth will out
c. Oil will float on water

In (84) and (85) the inferences concern the present or extended present time.

If the inference concerns a *past time sphere*, WILL plus the perfect infinitive form is used:

(88) a. You will have received the box by that time
b. He will have brought his mother back by that time
c. It will have been perceived that old Lady Lufton had heard nothing of Major Grantly's offence

The hypothetical epistemic form WOULD is more tentative than probability WILL. Consider:

(89) a. How long would that take?
b. That would be in the year 1879
c. That's what a sensible man would do

Its *past time reference* is rendered by WOULD plus the perfect infinitive form:

(90) That's what a sensible man would have done

SHALL

General Remarks

The original meaning of SHALL, the Old English SCEAL, is 'owe'. In Old English and Middle English, *sceal* took objects such as money and tribute. During the period from 1370-1570 SHALL meant 'I must, am under obligation', while WILL meant 'I want, will'. In time this distinction has very much eroded. In Modern English, SHALL is rarer than WILL and it is largely restricted to first person interrogatives, at least in informal English.

The modal verb SHALL has both a root meaning (*obligation*) and an epistemic meaning (*probability, prediction*).

Obligation SHALL (root meaning)

The root/deontic sense of SHALL is *obligation*. It is used to indicate that it is the will of the speaker/agent that imposes obligation:

(91) a. You shall never see me again
b. Good dog, you shall have a bone when we get home
c. You shall not go tonight. You shall not be excused if you go

Depending on the larger context in which it occurs SHALL may carry strong, undemocratic overtones of *imperiousness*:

(92) a. You shall obey my orders
b. No one shall stop me
c. She shall be mine

With this meaning SHALL is felt as obsolete in Modern English. It has survived in fairy-tales (where it is frequently on the lips of ogres, wicked witches, jealous stepmothers), in the biblical Ten Commandments (e.g., *Thou shalt not kill*), in legal and quasi-legal documents, in rules for card games and academic dress:

(93) a. The first condition of legal justice is that it shall hold the balance impartially
b. A player who bids incorrectly shall forfeit fifty points
c. The hood shall be of scarlet cloth, with a silk lining of the color of the faculty

In the *second* and *third* person statements, SHALL is interpreted as a *promise* or *threat* on the part of the agent:

(94) a. If you hurt a hair of her head, you shall answer for it
b. You shan't escape

SHOULD is *not* interpreted as the past tense of obligation SHALL (Warner 1993, Papafragou 2000). SHOULD communicates a *hypothetical* meaning, expressing *obligation* relative to existing norms or stereotypes.

Hypothetical SHOULD conveys obligation of a weaker type than MUST:

(95) You should clean the place once in a while

In such a context SHOULD expresses obligation with respect to norms, normal course of events and its time sphere is *present* or *extended present*.

Most probably SHOULD entered the modal system of English as a separate individual item. However, it retains overtones of its original meaning: *I must, I am under obligation*.

In Modern English, SHOULD is used as a hypothetical marker with inverted word order or in the quasi-subjunctive construction and its time sphere is present or extended present:

(96) a. Should you require any further assistance, please feel free to contact us
b. I do not desire that I should be left alone to the task

If *past time sphere* is intended SHOULD plus the perfect infinitive form is used:

(97) He should have been more kind to her at the time of their reconciliation

The sentence in (97) renders the ‘contrary-to-fact’ meaning of the deontic, normative hypothetical SHOULD.

Probability, Prediction SHALL (epistemic meaning)

SHALL is interpreted epistemically when its modal base is the system of rational laws and where the empirical evidence implies the truth of the sentence:

(98) a. A flower shall produce thousands of seeds, of which perhaps not one shall fall upon fertile ground and grow into a fair plant
b. Who touches pitch shall be defiled

Epistemic SHOULD covers the notions of *prediction*, *expectation* or *probability* and its time sphere is *present* or *extended present*. Consider the following examples:

(99) a. That should be the plumber
b. As I remember that should be the house
c. By heaven, this should be my book

For instance, the first example in (99) shows that the speaker cannot be certain that the circumstances in the actual world guarantee that the proposition p is true. The only evidence that he has for the embedded proposition comes from his beliefs about the normal, expected course of events. According to these beliefs, the plumber is expected to arrive some time after the speaker called for him. So, if the circumstances in the real world are as the speaker expects them to be, it follows that whoever is ringing the bell is indeed the plumber.

If the time sphere is *past*, SHOULD and the perfect infinitive form is used:

(100) a. The night should have turned wet since I came in, for he had a large hat on
b. In the prevailing temper of the public, the evidence should have been very clear indeed to induce an ordinary English jury to convict him

In sum, although SHOULD was originally the past tense form of SHALL, expressing past time reference, the situation has changed considerably in Modern English. SHOULD occurs nowadays with present time reference in both a deontic and epistemic interpretation. Its sense is that of conveying something stereotypical or normative.

OUGHT TO

OUGHT TO has both a deontic meaning (*moral obligation*) and an epistemic meaning (*weak necessity*).

Moral Obligation OUGHT TO (root meaning)

OUGHT TO (whose semantics refers to ideals or moral obligation / imperatives) resembles obligation MUST but with a slight difference in meaning.

The obligation meaning of OUGHT TO, different from obligation MUST, rather conveys lack of confidence in the fulfillment of the situation described. "For example, if one says *You must buy some new shoes* one assumes that the purchase will be carried out. But *You ought to buy some new shoes* is a different matter – the speaker could well add under his breath *But I don't know whether you will or not*" (Leech 1971:157).

When deontic (obligation) OUGHT TO is used it is perceived as more formal and polite than obligation conveyed by MUST and its time sphere is present or extended present:

(101) a. You oughtn't to pick your nose in public	(formal / normative obligation)
b. You mustn't pick your nose in public	(strong obligation / interdiction)

Weak Necessity OUGHT TO (root meaning)

On its epistemic interpretation OUGHT TO communicates a much *weaker sense of necessity* than MUST. Consider the following example (Leech 1971):

(102) This is where the treasure ought to be

Past time reference is rendered by OUGHT TO and the perfect infinitive form:

(103) We have left undone those things, which we ought to have done, and we have done those things, we ought not to have done

NEED

The modal verb NEED has to be kept apart from the full lexical verb NEED. The lexical verb NEED has a third person singular indicative present tense form –s, it occurs with *to* and has non-finite forms. Consider:

(104) a. He needs to talk with you
b. I needed another dress so I bought one

In contrast, the modal verb NEED has the NICE properties (except for coda and emphatic affirmation). As modal verb NEED is a *suppletive form* of MUST.

NEED has both a deontic meaning (*obligation*) and an epistemic meaning (*necessity*).

Obligation NEED (root meaning)

Modal NEED does *not* occur in affirmative contexts. It is either used in questions or in negative sentences and *supplies these forms for the deontic/obligation* MUST:

(105) a. I have no less than five morning dresses so that I need never be seen twice in the same dress
b. Watson need not spend a single evening alone if he didn't like to
c. Need I tell my reader that...

There is a difference in interpretation between the modal form NEEDN'T and the lexical verb form DON'T / DOESN'T NEED. Consider the contrast below (Leech 1971):

(106) a. Lady P to her gardener: "The hedges needn't be trimmed this week, Smithern"
b. (same situation): "The hedges don't need to be trimmed"

Sentence (106a) means 'I don't oblige you to trim the hedges this week' (i.e., negation of obligation MUST) while sentence (106b) means 'the hedges have not grown enough to need trimming (i.e., negation of the lexical verb NEED).

In *indirect discourse* NEED, like MUST, is maintained and indicates a back-shifted event:

(107) a. She believed she need not fear any persecution

b. He told her that she need not worry

If *past time reference* is intended, NEED plus the perfect infinitive form is used:

(108) a. She need not have been uneasy
b. He made the cottage smaller than it need have been

There is also a difference in interpretation between the *negative past tense forms* of the two verbs NEED; their distinct interpretations are indicated below:

(109) I didn't need to go there (so I stayed home)
(110) I needn't have gone there (but I went there nevertheless)

DARE

As in the case of NEED, there is both a modal verb and a lexical verb DARE. They can be distinguished formally in that the lexical verb DARE has non-finite forms, has an -s inflectional form for third person present indicative and generally occurs with *to*.

Modal DARE has the NICE properties (except for coda and emphatic affirmation). Compare:

(111) a. John dare not come (modal DARE)
b. John doesn't dare to come (lexical DARE)

(112) a. Dare John come? (modal DARE)
b. Does John dare to come? (lexical DARE)

The lexical verb TO DARE means 'to venture, to challenge' while the modal verb DARE conveys the meaning of 'to have the courage or impudence to do something'.

Modal DARE is always hypothetical and subject-oriented. Consider:

(113) a. How dare he judge?
b. I was so upset that I dare not even go upstairs and call Sissie

The time sphere of DARE is present, extended present or future.

Past time reference is formed by DARE plus the perfect infinitive form:

(114) a. You know you dare not have given the order if you hadn't seen us
b. He dare not have done it if I had been with him

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